



**Health and Food Technology
(Higher): assignment**

Candidate evidence



Higher Health and Food Technology Assignment Candidate workbook

You must use this workbook to complete your assignment. The wording in this template must not be altered in any way.

There are spaces for your responses for each part of the assessment. You may complete the workbook by hand, or electronically.

Brief chosen for Assignment

Develop and international dish for a restaurant using organic ingredients.

Section 1: Planning (30 marks)

1a Exploring the brief (4 marks)

You should:

- identify and justify **four** key issues, which reflect all aspects of the brief.

Key issue	Justification
Develop	This is important as it means I will create a dish containing popular organic, international ingredients that will be suitable for a restaurant which will be able to fill a gap in the market therefore making it more appealing and enjoyable for the customers.
International	This means I will create a new organic dish containing worldwide ingredients that are used in different countries. This also means the customers will be trying different ingredients that come from other parts of the world that they might not have had before.
Restaurant	This means the dish must be of high quality and look appealing and presentable therefore making the customers want to pay good money for the dish. It also means it may be something different and unusual that the consumers can't cook from home.
Organic Ingredients	This means that the ingredients in the dish will not contain any chemicals or pesticides and will be fully certified by the soil association therefore meeting the customers expectations.

Identify the target group (if not already identified within the brief)	Teenagers in a restaurant
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1b Research (26 marks)

**(24 marks – 8 marks for each investigation)
(2 marks for linking the investigations)**

You should provide evidence of carrying out **three** investigations into the identified key issues using at least **two** different investigative techniques and showing how the investigations demonstrate progress towards your product.

The information you present from each investigation should include the following:

- the aim of your investigation
- the investigative technique you used
- the source(s) of your information

You must make sure the results of your investigations are clear. You must select and summarise at least **four** main points of information from each investigation which can be used to develop your product.

You should also show the links between each investigation. This can be done at the end of each investigation, or you could include it when the investigations are complete.

Insert the information you have gathered from your research on the following page(s).

Investigations

Internet research

Aim -

- To find out what an international dish is
- To find out the top 5 international cuisines in the world
- To find out what international dishes appear in 3 restaurants in Inverness
- To find out the most popular cuisine from the restaurants in Inverness and their ingredients
- To find out what organic is

Sources-

<https://www.reference.com/world-view/international-cuisine-aafc>
<https://www.listwo.com/top-10-international-cusines>
<http://www.revolution-bars.co.uk/bar/inverness/menus>
<https://www.cafe1.net/menu>
<https://girvansrestaurant.co.uk/menus/>
<https://www.japancentre.com/en/page/156-30-must-try-japanese-foods>
<https://www.lasvegas-sushi.com/japanese-food-what-people-eat-in-japan/>
<https://www.japanlivingguide.net/dailylife/food/japanese-spices/>
<http://www.sushishushi.co.uk/blogs/masterclass/12-essential-japanese-food-ingredients-for-chefs>
<https://dictionary.cambridge.org/dictionary/english/organic>
<http://eatingwell.com/article/15806/thedirty-dozen-12-foods-you-should-eat-organic/>
<https://www.orientalmart.co.uk/blog/luxurious-japanese-ingredients>

What is an international dish?

An international dish is foods and ingredients that are most commonly used in different countries.

I found that the top 5 international dishes world wide the results are below:

The top 5 international cuisines -

- 1-Italian
- 2-Indian
- 3-Indian
- 4-Mexican
- 5-Chinese

International starters and mains from three restaurants in Inverness-
Revolution-

- **Tempura prawns**
- Dough balls
- Tandoori chicken skewers
- Cajun chicken skewers
- Calamari
- Onion bhajis
- **Katsu chicken**

Café 1-

- **Tempura king prawn**
- Bruschetta
- **Tempura zucchini flower**
- Salt and chilli sticky pork belly
- Calamari
- **Tempura vegetables**
- Spaghetti
- Wok seared spicy vegetables

Girvans-

- Bruschetta
- **Tempura chicken**
- **Tempura halloumi**
- Enchiladas
- Fajitas wraps
- Spicy stir fried vegetables
- Green thai chicken stir-fry
- Red thai vegetable curry

Japanese	Italy	India	French	Turkish	Chinese	Mexican	Thailand
7	4	3	1	2	2	2	2

As Japanese is the most popular across the restaurants I will explore the Japanese dishes and ingredients.

Top 5 must-try Japanese food-

- Sushi
- Udon
- Tofu
- Tempura
- Yakitori

5 luxury Japanese ingredients-

- Crab
 - Toro
 - Wagya beef
 - Matsutake mushrooms
- Fugu

5 typical ingredients in a Japanese meal

- rice
- Noodles
- Vegetables
- Soy
- Fish

5 most popular Japanese spices and seasonings-

- Wasabi
- Ginger
- Karashi mustard
- Chilli peppers

5 essential Japanese ingredients

- 1-Soy sauce
- 2-Rice vinegar
- 3-Mirin
- 4-Sushi rice
- 5- Miso paste

I found out what organic means-

Organic means foods and ingredients that are made without using artificial chemicals while the plants are growing. At least 95% of agricultural ingredients are organic.

Some fruits and vegetables are high in pesticides therefore meaning they should be bought organically.

I also found 5 vegetables you should buy organically-

- Spinach
- Kale
- Bell peppers
- Celery
- Tomatoes

Conclusions:

- From the internet research I found that noodles were a typically Japanese ingredient therefore I may consider creating an international dish containing noodles as it will be a popular Japanese ingredient in my restaurant.
- From my research I found that tempura was a must try dish in Japan and was also the most popular Japanese dish in the independent restaurants. This means I may choose to make a tempura based dish as it will be an appealing Japanese dish in my restaurant.
- From my internet research I found that soya sauce is the top essential ingredient in Japanese cuisine therefore I may incorporate it in my international dish as it's the most commonly needed as an ingredient for Japanese cuisine therefore allowing me to make an international dish that will be popular in my restaurant.
- My internet research shows there are particular vegetables that should be sourced organically therefore I may incorporate spinach as it needs to be sourced organically therefore making it more appealing to customers in my restaurant.
- In my internet research I found that wasabi is a popular Japanese spice. This means I may use
- Wasabi in my organic, international dish to make it a popular Japanese dish in a restaurant.

Link between investigation 1 and 2

In my internet search I have found out about Japanese dishes and ingredients. I will now use this information to find out the likes and dislikes of my target market based on the results of my research.

Questionnaire

Aim- To find out the likes and dislikes of teenagers in a restaurant on Japanese ingredients and foods based on the information found from my first investigation to figure out what would be the most popular organic, international dish in my restaurant.

Results from the XXXXXXXXXX on the 13/02/22

1-What temperature do you like your food?

Hot-x x x x x x x x x x x x x x x x x x x x x x (20)

Cold-

2-Your preferred organically sourced vegetable?

Spinach-

Kale-

Bell peppers-x x x x x x x x x x x x x x x x (13)

Celery-

Tomatoes- x x x x x x x (7)

3-What seasoning do you prefer?

Wasabi-

Ginger-x (1)

Garlic- x x x x x x x x x x x x x x x x x x x x x x (17)

Karashi mustard-

Chilli peppers-x x (2)

4-How do you like your food to be spiced

Low- x x x x x x x x x x (9)

Mild- x x x x x x x x x x x x (10)

Hot-x (1)

5-Choose your favourite essential Japanese ingredient?

Soya sauce- x x x x x x x x x x x x x x x x x x x x x x (20)

Rice vinegar-

Mirin-

Sushi rice-

Miso paste-

6-Which Japanese style food do you prefer?

Sushi-x x (2)

Udon-x (1)

Tofu-

Tempura- x x x x x x x x x x x x x x x x x x x x x x (17)

Yakitori-

7- What typically used in Japanese dishes do you prefer?

Noodles- x x x x x x x x x x x x x x x x x x x x x x (13)

Rice-x x x x x x x (7)

Fish-
Soy-

8-What is your preferred luxury Japanese ingredient?

Crab-x x x (3)

Toro-

Wagyu beef- x x x x x x x x x x x x x x x (16)

Matsutake mushrooms-x (1)

Fugu-

Conclusions:

- From my questionnaire I found that 13 out of 20 preferred bell peppers as their organically sourced vegetable therefore I may incorporate these peppers in my organic, international dish to make it a popular choice in my restaurant.
- 17 out of 20 preferred their food to be seasoned with garlic therefore I may consider using garlic in my international, organic dish as it will make it a more popular choice in my restaurant.
- In my questionnaire 20 out of 20 chose soya sauce as their favourite essential Japanese ingredient therefore I may consider using this in my international, organic dish as it will make it a popular choice for the customers in my restaurant.
- From my questionnaire I found that 16 out of 20 chose wagyu beef as their preferred Japanese ingredient therefore I might choose to incorporate this in my international, organic dish to make it a popular choice for the customers in the restaurant.
- 13 out of 20 teenagers chose noodles as their preferred typically used Japanese ingredient therefore I might choose to incorporate this in my international, organic dish to make it a popular choice for the restaurant,

Link between investigation 2 and 3

I have found out about the likes and dislikes of my target market. I will now ask my Home Economics teacher about how I can make these ingredients into a dish suitable for a restaurant.

Interview

Aim- To find out how I can include the likes of my target market into a dish suitable for a restaurant that includes both Japanese ingredients and organic ingredients.

Source - Head Chef, Bentoya Japanese restaurant, 13 Bread St, Edinburgh EH3 9AL

1. In my questionnaire I found out that the most favoured organic vegetables were bell peppers and tomatoes. Can these organic ingredients be included easily into Japanese cuisine, if so, how would you suggest I do this?

In Japan and other countries organic foods tend to be very expensive and are therefore not routinely used in Japanese cooking however any vegetables such as spinach, bell peppers or mushrooms that can be purchased can be added into any Japanese dish in place of non-organic ones to meet the likes of our customers as it becomes more important

2. If found a luxury Japanese ingredient liked in my questionnaire was Wagyu beef – is this something that can be easily added to dishes for a restaurant?

This is not something we currently use on our menu due to availability and cost. We have a lot of fish, tofu, chicken and vegetable dishes. This would be different and could be a new addition to our menu though could be difficult to source in Scotland. Filet steak due to the tenderness could be used as an alternative if you could not find Wagyu beef or be able to use this as it is very expensive.

3. Are there any ingredients that you feel must be included in a Japanese dish?

Soya sauce is a basic Japanese ingredient that can be added to dishes or used as a dipping sauce, It also comes in a few varieties at a relatively low cost so could be a useful ingredient.

4. Would you say Japanese food should be served hot or cold?

Dishes can be served hot or cold in Japanese cuisine which makes it very versatile. In Scotland however customers prefer their main meals to be hot so if it is a main meal I would suggest that it is made hot.

5. Noodles appear to be an important ingredient In Japanese foods, what type of noodles would you recommend?

Whilst there are lots of different types of noodles it often depends on customer preference. Our most popular noodles are Udon noodles and these go well in dishes such as stir fries. Stir frying is also a very quick method of cooking which means customers are not waiting long so suitable for a restaurant.

6. What flavours do you think are important to use in Japanese cuisine?

As I said above Soya sauce is a good basic ingredient and can be used to add flavour to Japanese dishes. Another would be Wusabi which is a Japanese horseradish which gives a stong and spicy flavour.

Conclusions:

The head chef said that Udon noodles go well in stir fry dishes therefore I may consider making a stir fry that uses Udon noodles.

Both Soya sauce and Wusabi can be used to give flavour in Japanese dishes therefore I may consider adding one or both of these to my dish to add authentic flavours.

Wagyu beef is not currently used in the restaurant that I looked at therefore I may consider using this in my dish as it will be different to anything else on the menu. I may also consider filet beef as the restaurant Head chef said this was an alternative die to its tenderness.

Section 2: The product (12 marks)

2a Describing the product (2 marks)

From the research you carried out in 1b, identify the food product you will develop.

Food product: Tempura Style Wagyu Beef Stir Fry

You must provide a recipe for the food product.

This recipe must include:

- a detailed list of all ingredients used
- an accurate method

Insert your recipe information below.

Recipe Information

Stir Fry Ingredients

100g Wagyu beef, finely sliced
100g Udon Noodles
5mls of Garlic
2.5mls of Paprika
2.5mls of cumin
50mls of Soya sauce
2.5mls Wasabi
180g of spinach, diced
50mls of water
10mls of olive oil
50g of Bell Peppers, slices
150g of matsutake mushrooms, sliced

Tempura Batter

30g Plain Flour
70g Cornflour
80ml Sparkling Water

Prep Time - 15mins
Cook Time - 10mins

Method

Place the 100g of udon noodles in the 50mls of water for 3 minutes to allow them to soften and loosen and put them to one side.

Then cut the 100g of wagyu beef into finely sliced pieces and place them aside to prepare the tempura batter. To make the batter mix the 30g of plain flour with the 70g of cornflour, then start whisking in the 80mls of sparkling water and the batter is ready to use. Then cover the finely sliced wagyu beef in the batter and fry it for 4 minutes at 180c. until crispy and golden coloured.

Then add your 5mls of garlic, 2.5mls of paprika, 2.5mls cumin, 2.5mls of wasabi and the 50mls of soya sauce into a small bowl to prepare a mild sauce mix.

Once the sauce is prepared, start removing the stem and seed from the pepper and cut up the 50g of bell peppers into slices and put to one side. Then take your 180g of spinach and dice it into small pieces and put to one side with the pepper. After that wipe your 150g of matsutake mushroom with a damp paper towel and begin cutting into slices. Now put your 10mls of olive oil in your wok pan for 2-3 minutes at 175c to heat up then start adding your 50g bell peppers, 180g spinach and 150g matsutake mushrooms and stir continuously. Then add in the sauce mix to the vegetables and stir well before adding the 100g udon noodle into the middle of the pan and mixing thoroughly and cook for a further 3 minutes.

After that put the 100g of tempura wagyu beef you prepared earlier into the wok pan with the rest of your ingredients and stir for another minute before taking off the heat and plating, to serve hot.

2b Justification (10 marks)

You should explain at least **ten** ways your product meets the needs of the brief, based on the results of your investigations. You should identify and explain why the following aspects of your product are important in meeting the needs of the brief:

- a **minimum of four** features of the product
- a **minimum of four** ingredients used in the product
- a **minimum of one** cooking method

Justification

Ingredients:	Justifications:
50ml soya sauce	I chose 50mls of soya sauce because from my second investigation, question 5 that 20 out of 20 teenagers chose soya sauce as their favourite essential Japanese ingredient, Therefore this means that because it is a preferred ingredient, it is more likely that the international dish will be enjoyed by my target group.
100g Wagyu beef	I found from my first investigation that wagyu beef is a luxury Japanese ingredient and I also found that 16 out of 20 teenagers preferred wagyu beef as their luxury Japanese ingredient from my second investigation. Therefore including wagyu beef in my international, organic dish will meet the dietary preferences of my target group making them more likely to want to eat it.
50g bell peppers	I found from my second investigation question 2 that 13 out of 20 teenagers chose bell peppers as their preferred organically sourced vegetable. This is why including 50g of bell peppers in my international organic dish will make it a suitable option for the restaurant to include as it is a well liked vegetable.
150g matsutake mushrooms	I found from my first investigation that matsutake mushrooms are a luxury Japanese ingredient. This means including matsutake mushrooms will make my organic dish a popular international choice in my restaurant.

Feature:	Justifications:
Mildly spiced	I found from my second investigation, question 4 that 10 out of 20 teenagers preferred their dish to be mildly spiced. Therefore making my international, organic dish mild will make it a popular choice for the teenagers at my restaurant.
Served hot	I found from my second investigation, question 1 that 20 out of 20 teenagers chose that they preferred their dish to be served hot. Therefore serving my international, organic dish hot will meet the likes and dislikes of the teenagers in my restaurant.
Tempura battered	I found from my first investigation that tempura was a must try international Japanese food and from my second investigation, question 6 I found that 17 out of 20 teenagers preferred tempura. Therefore using tempura will encourage my target market to purchase my dish as it is something they like.
Japanese style	I found from my first investigation that Japanese is the most popular across the 3 restaurants in Inverness. Therefore looking at my ingredients list I used wagyu beef, wasabi and udon noodles as these were the favoured Japanese ingredients so are more likely to appeal to my target group.
Cooking method:	Justification:
Stir frying	I found out in my first investigation that stir fries were sold in international restaurants and in my third investigation I was told that stir frying was a suitable cooking method in a restaurant as it is quick and customers do not need to wait long. Therefore using stir fry as a method of cooking in my dish makes it suitable for an international dish to serve in a restaurant who need to serve food/customers quickly.

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

You must include photographic evidence of making your product at each of the following stages:

- all ingredients prior to commencing manufacture



- A stage in the manufacturing process



- The finished product



Section 3: Product testing (8 marks)

3 Product testing (8 marks)

You should now carry out **two** tests on your food product. This should include **one** sensory test and **one** other test.

For each test you should:

- identify the method of testing used, including the source(s) (1 mark)
- present the results of each test clearly and appropriately (2 marks)
- provide at least **three** key pieces of information based on the results of testing (1 mark)

Insert your product testing information below.

Product testing Information

Test 1 - Sensory Test

Aim: To find out if teenagers who like to eat in restaurants like the appearance, taste and saltiness of my product.

Method of sensory testing: Ratings Test

Sources: 5 teenagers who eat in restaurants aged 15-17

Results:

Testers	Characteristics		
	Taste	Appearance	Saltiness
1	3	1	5
2	3	1	4
3	3	1	5
4	1	2	4
5	3	1	4

Key:

1= like a lot

2= like

3= neither like or dislike

4= dislike

5= dislike a lot

Three key pieces of information based on the results of my sensory testing:

- The appearance of the Tempura style Wagyu beef Stir fry was liked by the majority of the testers as 4 of the 5 pupils rated the appearance as 1 meaning that they like it a lot and 1 pupil rated the appearance a 2 which meant that they liked it, this shows that most of the pupils liked the appearance so will be attracted to the dish in a restaurant and may be encouraged to eat it
- The taste of the Tempura style Wagyu beef Stir fry was rated a 3, neither like or dislike, by 4 of the 5 pupils and rated a 1 like a lot by one of the pupils this shows that most of the pupils have mixed feelings towards the taste of the Tempura style Wagyu beef Stir fry and may not be appealing for the majority of the pupils who rated it.
- The saltiness of the Tempura style Wagyu beef Stir fry was disliked by the majority of the pupils as it was rated a 4, dislike, by 3 of the 5 of the pupils and rated a 5, dislike a lot, by 2 of the 5 of the pupils, this shows that the saltiness was disliked by most of the pupils so the Tempura style Wagyu beef stir fry may not appeal to them as the Tempura style Wagyu beef Stir fry might have lacked flavour from the lack of salt and may have been bland for them.

Test 2 - Interview with Mrs xxxxx Home Economics Teacher at xxxxxxx High School

Q1) Do you think that the Tempura Style Wagyu Beef Stir Fry dish is suitable for a restaurant?

Yes it is a dish that looks like it could easily be served as restaurant quality.

Q2) Do you think this dish will be liked by teenagers?

I am sure that some teenagers will enjoy the dish however the wasabi flavour may be too strong for some teenagers taste buds.

Q3) What is your thoughts on the presentation of the dish?

It is well presented but perhaps requires some more colour as it is fairly bland.

Q4) Do you think the portion size is suitable?

The recipe does not state a portion quantity, but if this is for 1 person then I think that it is likely that it may be slightly too much for example 100g noodles is a lot for 1 person.

Q5) Do you think my dish would be classed as 'international'?

This certainly has aspects of Japanese / Asian cuisine with the noodles and wasabi and wagyu beef so is likely to be classified as international.

Q6) Can you suggest any improvements I could make to the dish?

As mentioned I think it requires more colour and possibly an adjustment to the sauce as it was slightly salty from the 50mls Soya Sauce.

Three points of information from my Interview:

- The portion size of the noodles was 100g and it was suggested this was too much so I may need to reduce this to make it suitable.
- The dish lacked colour so I will need to think about making it more colourful.
- The soya sauce made the dish slightly salty so I may need to cut this down.

Section 4: Evaluation (10 marks)

4a Evaluation (6 marks)

- (i) Evaluate the suitability of your food product for the brief based on the results of your **sensory test**. (3 marks)

Evaluation 1

4 out of the 5 testers gave the dish 1 for appearance, this is good because it means that the majority of the group liked the dish a lot for appearance and means that they are likely to want to try the dish.

Evaluation 2

4 out of 5 testers rated the dish 3 for taste which is neither like or dislike, this is not good as it means that I could improve the taste of my dish or the target group may not purchase this dish again.

Evaluation 3

3 testers rated the dish 4 for saltiness which is dislike and 2 rated it 5 which is dislike a lot, this is bad as it means the teenagers will be put off eating the product if it is too salty.

- (ii) Evaluate the suitability of your food product for the brief based on the results of your **second test**. (3 marks)

Evaluation 1

From my interview I asked Mrs XXXXX if she thought that the dish will be liked by teenagers and she said she was not sure they would all like it, this is bad as this may mean that wasabi flavour is too strong for the teenagers and may put them off buying it again meaning my dish is not suitable for the target market and the restaurant customers.

Evaluation 2

Also in my interview I asked Mrs XXXXX if my dish would be classed as international. She said it would likely be as it has aspects of Japanese cuisine, this is good as it means I have met the brief of the dish being international.

Evaluation 3

From the interview with Mrs XXXXX I asked what her thoughts were on the presentation of my dish, she said it was bland in colour, this is bad as the teenagers may not like the look of the dish so might not buy it, therefore making it unsuitable for the restaurant.

4b Amendments (4 marks)

Describe **two** amendments that you could make to your food product. (2 marks)

You should link these amendments to the needs of the brief, based on the information you have gathered in your investigations or the results of your testing.

Amendments could include:

- improvements to the product
- adaptations to the product
- variations of the product

Explain why each adaptation, improvement, or variation, is appropriate, linked to the needs of the brief and based on the information you have gathered in your investigations, or the results of your testing. (2 marks)

Amendment	Explanation
Amendment 1 Replace Soya Sauce with low salt / sodium Soya Sauce	This is necessary for my dish because in Test 2 the Interview with Mrs XXXXX she said in Q6 that the dish was slightly salty due to the Soya Sauce. In Test 1 all testers rated the saltiness 4 or 5 either dislike or dislike a lot, meaning they thought it was too salty. So I will change the quantity of Soya Sauce to ensure the dish is not as salty. This will mean that the dish is successful for the restaurant as customers will want to return and purchase it again.
Amendment 2 Add more colourful vegetables	I am going to add more vegetables because in Test 2 Q3 Mrs XXXXX said I need more vegetables to make the dish brighter and more appealing to my target group.