AQA Food Preparation and Nutrition

Food Investigation Assessment NEA 1

**Task**

Plan, prepare, cook, and present a range of dishes that include a good source of calcium

and contribute to good bone health. Present 3 dishes.



**Name:**

**Centre name:**

**Candidate Number:**

**Centre Number:**

**Task Analysis**

The task is asking me to plan, prepare, cook, and present 3 dishes that are a good source of calcium and contribute to good bone health. I will begin by researching and using my prior knowledge to assess a range of suitable dishes. I will then trial and demonstrate technical skills, then review the outcomes and discuss how these trails have justified my final dish choice. I will them plan my final menu, make a time plan, review the food safety, cost the dishes, and create a nutritional label for each dish. I will then make the final 3 dishes. After, I will analyse and evaluate the overall outcome of my 3 dishes.

Initial Ideas

* I plan to do a starter, main-course, and desert to cover a range of different dishes that are high calcium, to show how high calcium ingredients can easily be incorporated into meals.
* In at least one dish, I think I will use fish, specifically salmon because it is very high in calcium however other types of fish can be used such as sardines, I wanted to include a fish-based dish to show how dishes rich in calcium are accessible to pescatarians as well.
* I would like to incorporate pastry in a dish, puff, shortcrust, or choux.
* I plan to include some sort of bread in at least one dish.

**Prior Knowledge and Research**

Calcium is the most abundant mineral in the body: it is vital for good bone (and teeth) health; helps to maintain the central nervous system (the connection between brain and other body parts); assists regulation of muscle contractions, including heartbeat; makes sure that blood clots normally, which prevents excessive bleeding when a blood vessel is injured.

A deficiency in calcium can lead to conditions like rickets which occurs in growing bones (usually in children but possibly in teenagers too) which causes bones to curve and bones to be tender and painful. Additionally, conditions like osteoporosis that weakens bone strength and makes them more susceptible fracture, which usually occurs later in life, and osteomalacia, the softening of bones which occurs when new bones do not harden the way it should after forming, are also caused by calcium deficiency.

Sources of calcium

* Dairy products (milk, yogurt, cheese, etc).
* Fortified plant-based milks (soya, almond, etc).
* Canned fish with bones (sardines, anchovies, salmon, etc).
* Leafy green vegetables (broccoli, spinach, kale, etc).
* Seeds (poppy, sesame, celery, chia seeds).
* Tofu (as is usually coagulated using calcium sulphate).
* Beans and Lentils (cannellini beans, red kidney beans, navy beans, etc).
* Some fruits (rhubarb, figs, apricots, oranges, etc).

Fortification- The addition of vitamins and minerals to food. This is important as it improves the nutritional status of a populations, as they are gaining extra nutrients from food they were already consuming. Fortification is particularly valuable in low-income countries which has little access to nutrient rich foods relaying on basic, mainly carbohydrates to make up the majority of their diet. An example of fortification in a low-income country is the introduction of fortified rice (which can have added zinc, iron, vitamin A, vitamin B12 and vitamin B1) in countries in South Asia specifically.

Calcium and Vitamin D correlation

Vitamin D is complementary to calcium as the body needs vitamin D to absorb calcium. Without enough vitamin D, the body cannot form enough of the hormone calcitriol. This leads to insufficient calcium absorption from the diet. In this situation, the body must take calcium from its stores in the skeleton, which weakens existing bone and prevents the formation of strong, new bone. Vitamin D can be obtained from the sun, egg yolks, fish, liver, and fortified milk.

Suitable Dishes

|  |  |  |  |
| --- | --- | --- | --- |
| Dish | High calcium ingredients | skills | Other nutrition |
| Fish Cakes – using sardines | - canned sardines  - salmon (for Vitamin D)  Additional ingredients:  - spinach  - cheese | - peeling and mashing potatoes  - coating (in breadcrumbs)  - shallow frying | - protein  - omega 3 fatty acids  - iron  - saturated fat |
| Salmon and broccoli wellington | - salmon (vitamin D)  - broccoli  - butter (in pastry)  - fortified flour | - laminating pastry  - steaming salmon  - knife skills | - protein  - omega 3  - saturated fat  - fibre  - vitamin C  - Iron |
| Tofu fajitas | - tofu  - kale  - yogurt | - marinading  - knife skills  - stir-frying | - protein  - fibre  - fat  - carbs |
| Lasagne | - cheese  - milk | - pasta making  - kneading  - sautéing  - thickened sauce | - carbs  - fibre  - protein  - saturated fat  - vitamin C  - potassium |
| Profiteroles | - crème pate  - butter  - chocolate  - fortified flour | - piping  - filling  - choux pastry dough making  - sauce reduction  - baking | - carbs  - protein  - saturated fat  - high sugar content |
| Quiche | - milk  - eggs (vitamin D)  - butter  - fortified flour | - shortcrust pastry making (rubbing in method, rolling out/shaping pastry)  - blind baking | - protein  - fibre  - carbs  - saturated fat |
| Bean and beef meat balls | - black beans  - beef (vitamin A) | - reduction of a sauce  - shaping | - protein  - fibre  - vitamin C  - potassium |

Research Analysis

My research has allowed me to understand the nutritional benefits of calcium, the problems that deficiency can cause, like weak bone, and how essential it is in the diet. I have also researched the foods that have a high calcium content, meaning I must include them in my dishes, for example fish, dairy and leafy green vegetables. Furthermore, I have researched suitable dishes for my trail and final three dishes. I have concluded that for my trial I will make...

* Quiche, due to the technical skills of making shortcrust pastry, creating the pastry shells then, blind baking the pastry and the high calcium content of the dish because of milk, cheese, eggs, and any additional ingredients I choose to include.
* Fishcakes with a tartar sauce, as I must shape and breadcrumb the fishcakes, fillet the fish, mash, and dice the vegetables. I will use salmon, which is a high calcium fish, because it still contains bones.
* Tofu gyoza with a Chinese dipping sauce, I have modified a gyoza recipe for chicken gyozas to have tofu instead as tofu has a much higher calcium content but is also suitable for vegetarians. Making the gyozas is also a high technical skill because you must make a dough, shape them in to the traditional gyoza shape then, fry and steam them.

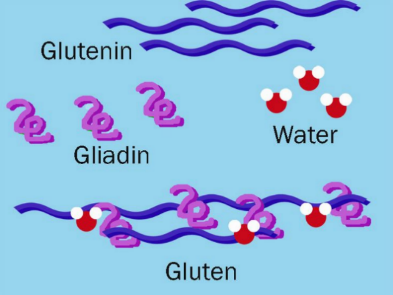
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A hand holding a piece of food

Description automatically generated with medium confidenceTechnical Skill Trial Write Up

Quiche

  I used an egg yolk to enrich my pastry, giving it a richer flavour. I also use cold butter to shorten my pastry, as softened butter allows gluten to form because the liquid combines with the glutenin and gliadin in the flour then creates gluten, meaning that the dough will become stretcher so that it is not shortened. This is not the desired texture, we are looking for a short, crumbly, biscuit-like texture, which I achieved by using cold butter. Furthermore, I enhanced the flavour of my pastry by adding parmesan cheese to my dough, which enriched and added an extra layer of cheesy flavour to my pastry. I blind baked using baking paper and baking rice, this guaranteed the pastry was evenly golden brown and did not have a soggy bottom. I achieved my desired shape by rolling out my pastry to a pound coin thickness, then paced it over a greased tin (to ensure that the pastry didn’t stick), then used a piece of rolled up, unused pastry to gently press down the sides of the pastry into the tin creating a ridged look. In my quiche filling, I fried sided onions and garlic in a pan with a small amount of oil, frying them gave them an extra crunchy texture and a deeper flavour. I added different herbs my quiche, enhancing the overall flavour, the addition of rosemary and parsley gave a more aromatic, natural flavour. I also included extra cheese in the quiche which due to the high fat content (and because it’s a great source of calcium) adds a very rich flavour to the quiche.

Key Skills Key ingredients

- Rubbing in method - Stir frying - eggs (C) - cream (C)

- Roll out dough - Using the oven - flour - butter (C)

- Shaping the dough - Slicing- onions - onions - cheese (C)

- Use of protein- coagulation - Blind baking - garlic - parmesan (C)

Developing into the final dish – could develop shortcrust pastry for the quiche into a choux pastry instead. This would also develop my dough making and shaping skills to a more complex level. I could also use an egg based filling, like crème pate, for my choux, using similar protein coagulation as in the quiche filling. Although, I am changing my dish from savoury to sweet, I am still using similar techniques in both dishes. I will also use shortcrust pastry in salmon en croute, which will use a similar recipe to make but will be used in a completely different way, wrapping something rather than being used in a pie like dish.

Fishcakes

I wanted all my fishcakes to be uniform to each other, as improve the presentation of the dish so I used a biscuit cutter to shape my fishcakes, I also garnished the dish with parsley to add a pop of colour enhancing the overall appearance of the dish. I finely mashed the potatoes to create a smooth texture, which is desirable in fishcakes as a crunchy texture is achieved by the breadcrumbs creating a contrast in texture between the smooth potatoes and crunchy exterior. To enhance the flavour of the fishcakes, I added spring onions which add a sharp acidic flavour, spinach which adds an earthy, fresh, aromatic quality (also adding extra calcium), added cheese which is rich and creamy making a smooth flavour and seasoned the salmon whilst cooking adding a sweetness through the lemon and a woodsy, bitter pine flavour from the rosemary, these flavour combination work perfectly together creating fishcakes, which are well balanced in all aspects. The fishcakes were all an even golden-brown colour, giving them a uniform appearance. In addition, I served the dish with a tartar sauce dip, which complemented the fish cakes perfectly as the creaminess added moisture and the acidic quality cuts through the fish flavour.

Key skills Key ingredients

- fine dicing (using claw and bridge grips) - shallow frying - potatoes

- en papiollte - emulsification - salmon (C)

- using oven - shaping - breadcrumbs

- flavour complementation - peeling potatoes - spinach (C)

- boiling potatoes  - cheese (C)

Developing into final dish

I could develop the techniques used to cook and prepare fish to making a similar salmon-based dish, like salmon en croute for example. In addition, as I have developed my understanding of flavours that complement salmon and other fish, I may extend that into my final dish by using similar herbs and spices. Furthermore, I could also develop the skills of creating a uniform and aesthetic appearance of the fishcakes into all my final dishes, by adding garnish and focusing on the uniformity of my dish. As well as this, I may add a sauce to complement the salmon en croute, perhaps with a similar flavour.

A plate of food

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Gyozas

A plate with food on it

Description automatically generated with medium confidenceTo ensure the perfect texture for my gyozas, I made my skins from strong bread flour as it contains more gluten improving the elasticity therefore could stretch the dough creating extremely thin skins without the dough tearing, the thinner the skins the more delicate and crispier the gyoza. For the filling, I decided to take a more untraditional route using tofu instead of the usual seafood or meat filling, this is due to the high calcium content of tofu and as it suitable for vegetarians and vegans showing how calcium can be added easily into any diet as it is so versatile. Despite the unusual choice of using tofu, I used traditional Japanese favours and vegetables, such as Pak choi, ginger, sesame and oyster sauce, these favours blended perfectly creating an aromatic, rich filling complementing the tofu and gyoza skins perfectly. I folded the gyozas into peats along the edge taking time and precision to ensure they were all evenly folded creating making them all uniform, the sealing with water. I then fried and steam the gyozas in a pan, giving them a crispy, golden exterior but ensuring that the filling has been cooked through evenly. To accompany my dish, I made a rich, sticky Asian inspired dipping sauce, I reduced this sauce allowing it to gelatinise creating a thick, sticky sauce which added moisture and due to the traditional flavours complemented the gyozas perfect.

Key skills Key ingredients

- dough making - frying - tofu (C)

- kneading - steaming - bread flour

- shaping - reduction of a sauce - Pak choi

- flavour complementation

Developing into final dish

I could develop the skills of dough making into a dough, using similar kneading techniques. I am also incorporating the skills of shaping the dough into my bread for my final dish, as I will shape the dough to add to the aesthetic appeal of the dish.

Reason for choice

Salmon en croute

I have decided to make a salmon en croute as it develops the skills from my technical trails of pastry making and the preparation salmon, my pastry skills will be expanded by making puff pastry instead of shortcrust. Puff pastry takes much more precision and care as you must laminate the pastry, creating layers that expand when baked, this is a very high-level technical skill. I also plan on creating a lattice on the outside of the pastry, which is developing the skills of shaping doughs from the gyozas and the quiches, this adds the aesthetic appearance of the dish. Furthermore, I discovered flavours and ingredients that complemented salmon when making fishcakes, such as spinach, rosemary and lemon, so plan to incorporate these flavours into my salmon en croute. In addition, Salmon has a very high calcium content (as does spinach) this links to my task, incorporating calcium into my dish once again showing that calcium can easily be adapted into any diet not just in traditionally high calcium dishes (for example in dairy products) as this dish would be suitable for pescatarians.

This dish will have good time management as the puff pastry need time to cool in the refrigerator as I will be able to use the time it takes to chill to prepare my other dishes and ingredients. The dish is also very balanced (and high in calcium): leafy greens (spinach), which provides fibre (improving digestion) and vitamin A (improving vison and immune system); salmon, which contains omega 3 fatty acids (which supports the health of the eyes, the brain, the heart, just to name a few), protein (helps to maintain muscle mass), B vitamins (these help to turn food you eat into energy, create and repair DNA, reduce chronic inflammation) while also containing high amounts of calcium.

I intend to present the dish using a few slices of the salmon en croute, accompanied by some long stem broccoli (which is high in calcium as well as providing a vibrant bright colour to contrast the neutral salmon en croute) and a herb sauce (which adds moisture to the dish and also can make a design on the plate providing additional aesthetical component). I also plan to serve my dish on a black slate, this gives a rustic but clean feel to the appearance as it is a solid black colour, the colour also provides a contrast to the vibrant green as well as to the neutral/pastel colour of the salmon.

choux au craquelin

I decided to make choux pastry to develop the pastry making skills from the trails (making shortcrust), the dough making skills also continue when making the craquelin for the choux as it involves making a biscuit like dough and shaping it using a cutter, similar to the skills involved in making the shortcrust for the quiches. I have also decided to fill the choux with crème patisserie, as it has the high technical skills of using gelatinisation and coagulation of a source. To ensure that my choux are all uniform in shape and size I will use a piping bag with a specific nozzle and will use a pencil and a circular object to trace where I am going to pipe, on the baking paper. Also to guarantee the perfect rise, I will sprinkle a small amount of water onto my baking paper, therefore the water will evaporate under the heat turning to stream forcing the choux to rise. I plan to flavour my crème pat to give it an enhanced flavour profile, the combination of this and the rich, slightly caramel flavour of the craquelin (due to the brown sugar and the butter) creates a perfectly sweet and rich flavour. Furthermore, due to the eggs, milk and butter in the choux and the crème pat, the dish has a high calcium content. Due to the dairy products, the dish is also high in vitamin D (helps to absorb the calcium) and protein (maintains muscle mass).

For the presentation of the dish, I will use one large choux which has been sliced in half and filled with the crème pate this means that the crème pat is visible, not concealed with in choux. I also will pipe a small amount on top, with a raspberry placed on top as well as a sugar work shard, this adds an extra pop of colour whilst also drawing connection to the berry coulis that I will add around the edge of the plate. To enhance the colours within the dish I will us a white plate which brings attention to the bright, vibrant red of the berries.

Meatball sub

My meatball sub will be using the development of the skills I used in my trails, for example dough making (from the shortcrust) into bread making, shaping the dough into an elaborate design (from the gyozas). However, I will as be including new skills like reduction of a sauce, for the tomatoes source and using a biological yeast raising agent. I have also adapted the traditional meatball recipe to include a mixture of beef and black beans to reduce the saturated fat content and to increase the calcium content, also showing how recipes can be adapted to be vegetarian if needed but also having a high calcium content. The black beans while being high in calcium, they are also rich in antioxidants (lowering the risk of type 2 diabetes, some cancers and heart disease) and they can also help to regulate blood sugar levels. Furthermore, due to the tomatoes in the source, the dish will have additional nutritional benefits: potassium which helps to keep your heart healthy; group of phytochemicals called carotenoids, these include lycopene, lutein and beta-carotene which assist in maintaining eye health and may protect against age-related macular degeneration and other eye diseases; vitamin K which is necessary for blood clotting and wound healing.

I plan to serve the dish on a wiped, pristine white dish, this gives a clean appearance to the dish and also contrasts the vibrant colour of the red tomato sauce. In addition, I will serve with two sprigs of green parsley which also contrasts the colours within the dish. I also plan to use a squared shaped dish which will mirror the shape of the baguette making the plate appear fuller.

Trial Time Plan

Puff Pastry

Salmon

Meatballs

Bread

Colour Code:

Choux

Washing

|  |  |  |  |
| --- | --- | --- | --- |
| Time | Method | Health and Hygiene | Quality Control |
| 8.45  (Mise en place) | Preheat the oven to 180C. Tie hair up. Wash hands. Put on clean apron. | Tied up hair removes the risk of any hair particles getting in any food. Wash hands thoroughly with hot water and antibacterial soap. Always where a clean apron so no bacteria can potentially get into food. |  |
| 8.50 | Tip the white bread flour (250g), yeast (4g), salt (a tsp) and oil (½ a tsp) into a bowl. Pour over 325ml warm water, then mix (with a spatula or your hand), until it comes together as a shaggy dough. Make sure all the flour has been incorporated. Cover and leave for 10 mins. | Make sure all equipment is clean and so are your hands are thoroughly washed with hot water and soap as you will be handling the dough, avoiding any potentially harmful bacteria getting into the dough. Clean down work surface with food safe anti-bacterial spray. | Don’t put the salt directly on top of the yeast and the salt kills the yeast. |
| 8.55 | Put 175g plain flour and a pinch of salt in the food processor. Turn it on and steadily pour in 75ml of water. When the dough comes together, cover it in cling film and chill for 20 mins. Put 112g butter in between two pieces of baking parchment and soften it by tapping it with a rolling pin. Cut the butter in half and repeat the process until the butter is pliable but still cold. Reshape to the size roughly of a postcard. Cover the butter and place in the fridge. | Have clean equipment and workspace. Wash hands thoroughly. | Water must be cold to avoid melting the butter and developing lots of gluten. In puff pastry, a small amount of gluten must form to give the dough elasticity to be stretched into fine layers however too much can lead the pastry to not have the desired flaky texture. |
| 9.05 | Wash any equipment used so far, that are available to clean. | Clean with antibacterial soap thoroughly in hot water. To remove any bacteria. | Make sure any remnants of ingredients has been removed from the equipment, as to not affect any food later on. |
| 9.10 | Make 130g of drained black beans into a purée by masing with a potato masher. Add the 15g breadcrumbs (use a food processor to make breadcrumbs), 1/3 of a large egg beaten, 1 small garlic clove (mashes), 1/3 of finely diced onion and spices (1/2 tsp of oregano and 1/3 tsp of dried basil), then tip into a bowl and add the 165g of ground beef mince, if you wish. Mix well, form into large meatballs, spread out on a lightly oiled tray and bake for 25 minutes until brown. | Avoid cross-contamination by not letting the mice touch the work surface, washing hands after shaping the meatballs and before touching any other surface or equipment (e.g., before using oven gloves to put them in the oven). Where oven gloves when placing them in the oven, to reduce risk of burns. | Ensure the onion is finely diced so that the chunks are not too large as to overload the meatballs. Measure the mixture used for each meatball to achieve an even size, for example 2tbsp. |
| 9.20 | Lightly flour the work surface. Knead the dough for at least 10 mins until it becomes tighter and springy. Pull the dough into a ball and put in a clean, oiled bowl. Leave for 40 min, or until doubled in size. |  | Kneed for required time so the gluten can develop. Floured surface prevents dough sticking. |
| 9.30 | Remove meatballs from the oven. Turn oven off. Allow to cool and then put into the fridge. | Wear oven gloves. Use a temperature probe and make sure the temperature is above 75C. Meat is high risk so cannot be left out for longer than 2 hours. You cannot put hot food into the fridge as it will raise the whole temperature of the fridge resulting in bacteria potentially being able to grow. |  |
| 9.32 | Remove the puff pastry from the fridge. Turn out on lightly floured work top. Roll the pastry into a circle shape. Put the butter in the centre of the pastry and fold over the right and left sides of the circle, overlapping in the middle. Press the dough with your rolling pin to make it longer and then lightly mark into thirds. Fold the bottom third up to cover the middle third and the top third down. Seal the dough gently by pressing down on the edges with your rolling pin. Give the dough a quarter turn. Roll the dough out to a long rectangle, keeping the edges square and the sides straight. Mark the dough into thirds again, fold the bottom third up and the top third down. Seal the edges and give the dough a quarter turn. Repeat one more time, cover and chill for 10 mins. | Wipe down the counter with antibacterial spray. Wash hands thoroughly before hand. Avoid touching mouth, face and hair after washing your hands. | Take time a precision when folding the pastry as the layers are important and easy to mess up. |
| 9.47 | Wash all equipment used so far. | Clean with antibacterial soap thoroughly in hot water. To remove any bacteria. | Make sure any remnants of ingredients have been removed from the equipment, as to not affect any food later. |
| 9.53 | To make the spinach filling, tip the spinach (115g) into a heatproof bowl. Pour over boiling water from the kettle, stir to wilt and drain well. Squeeze excess water out of the spinach and set aside to cool. Add the cream cheese (90g) and egg yolk to the spinach, season with salt and pepper and mix to combine. Set aside. | Take care when using boiling water, to avoid burns. | Ensure all water is drained, as any extra moisture could affect the consistency of the filling. |
| 9.55 | Repeat last step again, chill for 10 minutes. |  |  |
| 10.00 | To Make the Craquelin: In a bowl and using a hand whisk, cream together 38g of brown sugar and 38g of butter. Add 38g of flour and a pinch salt, thoroughly mixing until no dry flour remains and a damp, crumbly meal has formed. Using your hands, bring dough together to form a ball (it will be a bit sticky but do not add extra flour). Place on baking paper and roll out into a rectangle around 3 cm thick. Place another sheet of baking paper on top then place into the fridge until use. | Ensure hands are cleaned thoroughly as you will be handling the dough. | Chilling allows butter to cool and become firmer, meaning that they are easier to handle and bake slower giving the craquelin a crispier texture. Using baking paper to roll out reduces creasing so the dough is smoother. |
| 10.10 | Repeat Last step again, chill for 30 mins. |  |  |
| 10.15 | Tip the dough onto a lightly floured surface and roll into a long sausage shape. Halve the dough, so you have 2 equal-sized portions. Roll each into the desired shape put on a dusted baking tray, leaving some room between the loafs for rising. Cover with a damp tea towel and leave to prove for 40 mins-1 hr or until almost doubled in size. | Wash your hands thoroughly, as you will be handling the dough lots. | Lightly flour the work top to stop the dough from sticking to it. Leaving the dough to prove in the cooled down oven also its warm environment which makes dough rise faster by speeding up the fermentation process in the dough, this is not necessary but will help to reduce the time needed to prove. |
| 10.25 | Whisk 1 large eggs yolks and 25g of caster sugar until pale and creamy, then whisk in 5g of plain flour and 5g of corn-starch. Heat 100ml of whole milk in a pan along with a tsp of vanilla extract until just at the boil then remove from the heat, gradually pour the milk into the egg yolk mixture whisking constantly until smooth. Transfer mixture back into saucepan. Cook over medium-low heat, whisking constantly and vigorously so that the eggs won’t curdle, until mixture thickens. Remove from heat and strain using a fine mesh strainer. Transfer to a medium heatproof bowl. Press a piece of plastic wrap directly onto the surface of the creme patisserie. Cool using a water bath and then place in the fridge to chill until needed. | Allow the crème pat to cool before putting into the refrigerator as putting hot/warm food into the fridge can raise the overall temperature potentially putting everything in the danger zone (5-65C) increasing the risk of bacteria growing. Take care around the hob, don’t leave any flammable materials lying near such as tea towels | Whisking continuously to avoid lumps as the starch clumps together. Using the sieve also helps to remove any lumps. Pressing cling film against the crème pat helps to stop a ‘skin’ from forming. Make sure the corn-starch is well whisked with the Yolks and Sugar before being incorporated into the Milk. It is always better to sift corn-starch as it tends to create lumps in the packet. To avoid lumps in the cream is to temper all the ingredients. |
| 10.35 | Clean any equipment used so far. |  |  |
|  | Preheat the oven too 220C. |  |  |
| 10.40 | To make the salmon, arrange the salmon fillet (250g) on a board, season with salt and pepper and cover with the fresh dill (small bunch). Spread the spinach mixture over the top in an even layer. Break an egg into a bowl and add 1 tbsp of milk and spare egg white from the filling. Whisk with a fork until smooth. | Use a clean chopping board. Wash hands thoroughly after touching the fish. | Make sure that the spinach mixture is evenly distributed over the fillet. |
| 10.45 | Remove pastry from the fridge. Roll the large piece of pastry out on a floured work surface so it is long enough and wide enough to wrap around the fillet. Transfer the pastry to a sheet of baking paper. Place the fillet to the left side of the pastry. Brush the pastry, all around the fillet, with the egg wash. Fold the pastry ends up and over the ends of the fillet and brush the pastry ends with the egg. Bring the side of the pastry to meet at the left side. Brush the egg on the ends of the pastry to seal and crimp around the edges. Roll out the remaining pastry and cut into 8 thin strips: lay 4 strips diagonally, and evenly spaced, across the top, and 4 strips across these to create a lattice pattern. Chill in the fridge for 15 mins. | Make sure that the worktop is cleaned with antibacterial spray. | The egg and milk mixture seals the pastry together due to the coagulation of proteins in the egg. Chilling allows the butter in the pastry to become solid again, as it may have softened whilst handling it. |
| 11.00 | Take the Craquelin from the fridge, using a 2 inch cutter cut out as many disks as possible from the dough. In a saucepan, combine water (78ml), butter (28g) and (2tbsp). Set over high and cook until liquid comes to a rolling boil and butter has fully melted. Remove from heat and add flour (42g). Using a wooden spoon or stiff silicone spatula, thoroughly mix in flour until no lumps remain. Return saucepan to medium-high heat and cook, until comes together into a stiff dough. Remove from the heat, transfer into a clean glass bowl and allow to cool until just slightly warm to touch. Add large egg, stirring well until the egg incorporated before adding the next, until a smooth, shiny paste forms. Transfer the dough into a piping bag, and line a baking tray with baking paper the sprinkle a small amount of cold water onto the tray. Pipe the dough in circular motion about 2 inches wide and about 3 inches apart. Place a disk of craquelin on top, not pressing down onto the dough. Reduce temperature to 200C on the oven and bake for 20 mins, until golden brown and well puffed. | Wear oven gloves when placing the tray in the oven. | Make sure that the water/butter mixture comes to a boil, so it is hot enough to absorb the flour, giving it the correct consistency. Sprinkling cold water onto the tray, improves rising as the water evaporates creating steam pushing the choux to rise. Reducing the temperature allows the choux to have high heat to initially rise but then will gradually cool meaning that they can become firm without burning. |
| 11.10 | Dust each ball with a bit more flour. Bake for 25-30mins, until light brown and hollow sounding when tapped on the base. | Use oven gloves to place into the oven. | Must cool before serving, as the insides continue cooking outside the oven, if you don’t it will have a more dough-like texture. |
| 11.12 | Clean any equipment used so far. |  |  |
| 11.20 | Glaze the pastry with an egg wash, place salmon en croute into the oven. | Wear oven gloves. |  |
| 11.20 | Finely chop a clove of garlic, half a tsp of dried oregano, a tbsp of tomato puree and add it to a frying pan with 1-2 tablespoons of olive oil. Sauté the garlic for 1 minute or until fragrant (don’t let it brown). Add one tin of tomatoes, add a pinch of salt and simmer on a medium heat for 5-8 minutes until reduced slightly. | Be careful around the hobs. | Cook on a medium heat, so that the garlic doesn’t burn which could affect the flavour of the sauce. |
| 11.30 | Remove choux pastry from the oven. | Wear oven gloves. |  |
| 11.30 | Cut the long stem broccoli into individual pieces, Place in a pan and cover with water bring to a boil and cook for 2-3 minutes. | Do not leave anything flammable near the hob when turned on. | Do not boil for over 3 minutes as they will become over cooked and soft. |
| 11.35 | Remove bread from the oven, place on a wire rack. | Wear oven gloves. |  |
| 11.35 | Clean any equipment used so far. |  |  |
| 11.37 | Remove salmon en croute from the oven. | Wear oven gloves. |  |
| 11.37 | Make the summer fruit puree, use 20g of mixed fruit use a hand blender and blend until smooth. |  |  |
| 11.38 | Add 50g of caster sugar and 25ml of water to a pan and bring to a boil. Once the caramel turns brown and turns brittle when dropped into cold water, pour onto a tray lined with baking paper, then leave to go brittle. |  |  |
| 11.40 | Make the herb sauce by adding 1 spring onion (finely chopped), 1 tsp of caster sugar, 1 tsp of chopped chives, 1 tsp of fresh dill and 70g of crème fraiche. |  | Finely dice the vegetables so they are fine enough that the sauce is smooth. |
| 11.43 | Fill the choux buns with the crème pat, cutting the choux in half. Take the puree and plate, then place a raspberry and caramel shard on the top of the piped crème pate. | Take care when using the knife, cut away from you. | Use a sharp knife to cut them in half, so that there is a clean cut. Use a piping bag with a ridged nozzle to create a ribbed affect on the cream. |
| 11.46 | Use a spoon and make a circle around the edge of the plate with the herb sauce, slice the salmon en croute into 4 pieces and arrange lying on top of each other, in the middle of the plate. Stack the broccoli in a criss cross fashion. Place a slice of parsley to serve. |  | Only use a small amount of sauce and spin the plate whilst spreading. |
| 11.50 | Take the cooled bread and slice in half. Then fill with the roll with 4 meatballs and then coat with tomato sauce, grate cheese on top and sprinkle diced parsley on the top. | Take care when using the knife, cut away from you. | Use a bread knife to slice the bread. Try not to over fill with sauce as to not let it run out the sides. |

Evaluation

A picture containing vegetable

Description automatically generatedSalmon en croute

 Overall, my salon en croute worked very well: the pastry had distinct laminated layers and was a golden-brown colour aided by the egg wash; the salmon was a light pink colour indicating it was cooked perfectly and a had a flaky, soft texture; the cream cheese and spinach filling provided a contrast to the pastry and salmon cutting through both flavours perfectly, adding a creamy, fresh, earthy flavour; the addition of the herb source provided a flavourful and citrus-like profile, however with a slightly grassy undertone (from the dill) and a fresh, creamy flavour (from the crème fraiche) which complemented the salmon ; the broccoli that accompanied the dish also aided in giving the dish certain freshness and as the broccoli was cooked perfectly adding diversity to the texture of the dish due to the crunchiness. The overall aesthetic of the dish was pleasant and appetising: the pastry was well shaped and had a delicate, Criss-cross design; the colour contrast of the pink, green, white and golden brown against the black slate was an excellent choice in plating as the colours stood out and appeared vibrant; the sliced salmon en croute, the swoosh and layered broccoli filled the plate giving the presentation a particular depth.

I could further develop this dish by perhaps making the design more elaborate, however I was slightly restricted with this due to the time limit for the 3 dishes, this could involve doing a lattice on top of the pastry or perhaps cut outs of pastry designs. This dish could also be developed using different vegetable for the filling depending on your taste or desired nutritional needs, I used spinach due to the high calcium content but for example if you wished for more vitamin C you could use green peppers or broccoli. This dish is also very versatile meaning can be changed for different dietary requirements and taste preferences, for example a vegetarian could change the dish to include tofu instead of salmon or someone looking to increase the protein in their diet could swap the salmon for beef which could be accompanied by a red wine sauce instead of the spinach filling. To ensure that the produce used it at its freshest and if environmental impact is a concern buying seasonal food is important, therefore buying fresh salmon between the months of April and October would be the perfect time however spinach is in season during the spring months hence the best time to make this dish is between the months of April, May and June. Although, due to how versatile this dish is it could be adapted to fit what produce is in season at the time, this reduces need for food to be imported (increasing its carbon footprint) and ensure that the produce is at its freshest. I could plate the dish differently by stacking the broccoli to create a bed for the salmon en croute, the use the herb sauce and swirl it around the outside.

I designed this dish to include a high calcium content, however it also included lots of other nutritional benefits. The salmon is rich in omega 3 fatty acids which is an essential in the diet as the body is unable to produce it alone, the fat is known to aid in decreasing inflammation, lowering blood pressure, reducing the risk of cancer, and improving the function of the cells that line your arteries. The dish is also high in also high in vitamins such as vitamin B (from the salmon), C (from the broccoli) and A (from the spinach). The addition of broccoli to company the dish increased the fibre content of the dish, which is beneficial for the digestion system, this could be useful for someone who has bad gut health or stomach problems. Due to the salmon and the butter in the pastry, the dish is also high in protein, which is beneficial for improving muscle mass, this could be particularly useful for an elderly person, someone who does lots of exercise or a child who is still growing. Nutritional analysis and evaluation:

Diagram

Description automatically generated with medium confidenceThe label shows that the dish is low in sugar, as it’s a savoury dish meaning no additional sugars are added and the only sugar is from the sugars the occur naturally, and salt, as I used low salt options, this makes the dish accessible to those with diabetes or heart problems, as too much salt. The dish is high in calories as it contains lots of fat from the butter, cheese, and salmon, which is a concentrated source of energy, the dish overall is just over half an average adult’s daily calorie intake however intake can vary depending on many factors, such as age, height, and amount of exercise. Due to high calories, this dish may be more suitable for a person who is active and a younger age (18 – 35), however someone who does not meet these requirements could also be suitable if it is only consumed occasionally, as eating high calorie food frequently if not active can lead to weight gain which could lead into other health problems (such as strokes and coronary heart disease). The fat content of the dish is also high, this is predominantly due to the fish, cheese, and butter, 17g of the fat is saturated (84% of the daily intake) this is from the butter and cheese. Despite using low fat options for the cheese, which I could not do for the butter as the pastry requires fat to form the layers as it prevents the dough from interacting with one another.

Table

Description automatically generatedCostings:

Overall, the dish is reasonably affordable, therefore making it accessible to everyone. This is due to the ingredients mostly being UK grown, removing the additional costs of transporting ingredients from abroad but in addition also lowering the carbon footprint and ensuring all ingredients are ethically sourced at the highest standards. Although, some ingredients that may not be in season in the UK at the time could be imported from abroad (typically vegetables like broccoli or spinach in this dish), sometimes this increases the cost of ingredients as they must be imported increasing the cost of transportation however other times, they are cheaper as their laws and quality control are often less strict than the UK particularly in fish or meat. Trawlers from abroad are allowed to catch much more fish that UK trawlers with far less restriction on where and what they are allowed to fish, in turn buying imported fish is far cheaper than buying British however it is up to your own morals to decide which you buy. If the dish was to be purchased from a restaurant, the dish would be relatively inexpensive, considering the portion size and the quality of the ingredients. The dish could be made cheaper by reducing the potion size or buying cheaper lower quality fish or buying premade puff pastry, this would reduce the cost of the pastry and also the time taken to prepare the dish (thus improving accessibility as those without a high cooking ability or the time available will be able to make this dish).

Meatball subA picture containing text, food, snack food, sandwich

Description automatically generated

Overall, my meatball sub went excellently: the bread was well-shaped, had a great rise and was a perfect fluffy texture in the inside but had a golden crisp exterior that would be expected of a baguette; the sauce was rich in flavour, bursting with Italian style flavours due to the garlic and oregano, the garlic had a caramelised flavour as it is sautéed which added to the overall flavour of the dish; as a result of the mixture of black bean and beef mince mixture, the meatballs still had a traditional deep beef flavour but in addition a creamy, mild flavour from the black beans, these flavours complement each other well as the flavour of the beans does not affect the flavour of the beef due to its mildness, the beans also affected the texture of the meatballs as they are smooth and creamy this made the meatballs much easier to shape; I included lettuce when severing this brought an extra freshness to the dish, as well as additional textural quality due the crisp, crunchy texture of the lettuce, which provided a contrast to the richness and smoothness of the meatballs and sauce. The dish was aesthetically pleasing overall, it was full of colour due to the vibrance of the tomato sauce and the lettuce which was enhanced by the golden-brown colour of the bread contrasting it. The colour contrast was also aided by the use of a white plate, which emphasised the vibrant colours within the dish.

The dish could be developed further to make the dish more elaborate by creating a pattern or design with the bread, if I had more time, this could be done by braiding or scoring the bread. Furthermore, the dish is very versatile and could be changed to meet specific dietary needs or ethical beliefs of a person: for example, the beef could be replaced with black beans entirely this reduces the saturated fat content of the dish (which is beneficial for those at high risk of CHD, high blood pressure or other heat related issues) whilst also by removing the beans suitable for vegetarians; the bread could also be adapted to use wholegrain flour thus improving the fibre content of the dish, this reduces risk of developing health issues like heart disease, stokes, type 2 diabetes and bowel cancer, whilst aiding your digestive system as a whole. The dish could be adjusted and adapted in many ways, in addition to the examples I’ve given. The overall style of dish can be changed simply to create a totally different flavour experience; to create a Mediterranean style dish, the bread could be exchanged for a pitta bread and spices like thyme or paprika could be added to enhance the Mediterranean style flavours. This makes the dish incredibly accessible as it can be changed easily to meet your own needs and flavour preferences.

This dish is high in calcium, as a result of the black beans and the beef mince, this is meeting the criteria of what I designed the dish for. In addition, the tomatoes and the beef also provide vitamin A which complementary to the calcium as it is required by the body to absorb the calcium. The beef mince is also a great source of protein, 25g of protein per 100g, protein is beneficial as it helps to build, maintain and repair cells which helps to maintain muscle mass, this could be helpful for those who do lots of exercise and are looking to build muscle mass as well as elderly people due to the fact that as there health and body deuterates the additional protein maintains their muscle mass and bone strength. Moreover, as a whole the dish contains a low amount of calories (only 38% of the recommended daily intake of an adult), this makes it suitable for those on a calorie deficit diet or who require less energy intake than others, specifically elderly people may have to have a low calorie diet as a result of low mobility, which means that their calorie intake is not being burned off leading to weight gain that could have a significant impact on their overall health.

Graphical user interface, application

Description automatically generated with medium confidenceThe label shows that the dish in within the limits of the recommended daily intake of an adult, it is low in fat, saturates, sugar and salt this makes the dish a very healthy option which could be suitable for all kinds of people. The beef mince is high in fat, but as it is complemented by the black beans it is balanced, also if you were looking for a lower fat alternative, lean beef could be used. The low fat content makes the dish suitable for someone who is at high risk of obesity, high cholesterol, CHD or other similar health problems, as increased fat intake can increase risk. On the label, you can also see that the dish is low in saturates which is a type of fat, the difference between saturated and unsaturated fat is their form at room temperature and their impact on your health. Saturated fats tend to stay solid and can cause fatty deposits in blood vessels, leading to hardening of the arteries. The fat hardening in the arteries can lead to high blood pressure, pains in chest or anywhere else that has a blocked arterie and weakened muscles as a result of lack of blood circulation aswell as other issues.

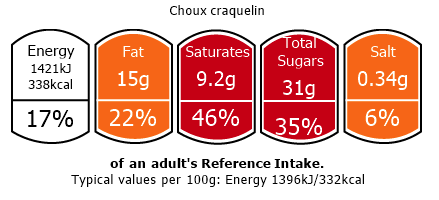
Table

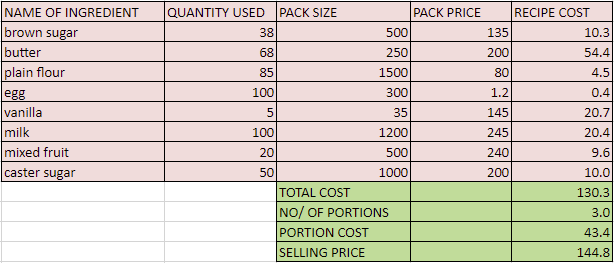
Description automatically generatedCostings: Overall, the dish is extremely cheap which makes the dish much more accessable. It relatively cheap if you make it at home or if you buy it from a restaurant/shop, whilst still being a substantail meal. The most expensive aspect of the meal is the beef mince, which is £1.61 per recipe which is relatively inexpensive. However, if you are looking to reduce the cost of the meal, you could completely remove the mince using wholey black beans or the mince used could be cheaper, meaning it would most likely be lowever quality. Beef has always been fairly expensive, despite this at the moment the cost of any animal products is rising, this is due to many factors: as a result of the energy price increase in the UK, rearing any animals has become much more expensive because of electricity, animal food (grains, silage and hay) and fertilisers price dramatically increasing, these costs have been causing more issues particularly during the winter months as animals must be kept indoors and have to be fed with grains etc; futhermore, as the affects of climate change have become more prominent, people are opting to buy local British meat instead of imported foreign meat as they have less food miles as they are not imported, this makes meat more expensive as animals cannot be raised as cheaply compared to abroad as farmers in the UK must adhere to strict rules and regulations about animal welfare (for example cows housed indoors must be provided with enough room to roam freely and lie in comfort at the same time) aswell as meeting red tractor farm requirements whereas abroad the rules are much more relaxed, therefore farmers aboard have lower costs.

Choux en craquelin

As a whole, my choux went well. The craquelin was well cracked, crispy and golden brown with a rich buttery, caramelised flavour. The choux was well risen and evenely shaped, spraying water onto the tray (which caused the water to evaporate and push the choux to rise) and using a piping bag (which made it easier to shape the doough accurately) helped this. My crème pat was thick enough to pipe, but still had a smooth, creamy consistency which made it perfectly, light and delicate. Futhermore, the addition of the berry coulis added a sharpness due to the tart, acidicity this complemented the sweetness of the choux and crème pate, making the dish much fresher as a whole. The coulis also made for great decoration, making it both practical and aesthetically pleasing, by using this is plate appeared much more filled aswell as adding a colour contrast between the vivid berries and the choux. The addition of the sugar work shard also added extra decoration, whilst also showing high technical ability as sugar work is extremely difficult as there is many things that could potentially go wrong, for example the sugar could crystallize or it could burn if you do not pay attention to it.

The dish could be adapted to any flavour combinations, depending on your own preferences, for example the crème pate could be flavoured with lemon zest, the berry coulis could be replaced with chocolate choux or the choux could have coco powder added. This makes the dish very adaptable meaning that it can be easily changed. If the craquelin is not to your liking or taste preference, then it can be exchanged for chocolate, it just needs to melted and the choux dipped in it, this makes the dish profiteroles. Or if you prefer cream compared to crème pate that can also be replaced. Futhermore, if you require a specific diet ,for example a vegan diet, elements within the dish can be changed to meet the requirements; such as the butter could be replaced by a plant based alternative. It would be difficult to make the dish more healthy as it is a dessert, and is always going to be relatively unhealthy and high in sugar. Despite this, the choux its self is actually low in sugar as it is simply just butter, eggs, water and flour, however due to the butter it is high in fat, to reduce this a low fat alternative could be used. This makes the dish much healthier overall. However, this could affect the physical quality of the choux.

As you can see, the dish is obivously very unhealthy, due to the high fat, sugar and salt content even with this very small portion size. Dispite this, as a result of the small portion size, which is perfect for dish that is as sweet and rich as this, the amount of calories is reasonably low (only 17% of the recommended daily intake). However, it must be taken into account the fact that this dish would usually to be accompanied by a main meal first, therefore it is not going to meet the nutritional expectations of a full meal. Therefore, it is more of a treat rather than a meal. Despite this if it is eaten too regularly in larger portion sizes, this could lead to many issues such as obesity or type 2 diabetes as a result of the high sugar and fat content. The high sugar comes from the sugar work shard, the brown sugar in the craquelin and the sugar in the crème pate, but also from the berry coulis however they are mostly natural sugars however they offer nutrients that keep your body healthy, for instance potassium, vitamin C and folate. Potassium helps to maintain normal levels of fluid inside cells; vitamin C helps to protect cells and keeping them healthy. maintaining healthy skin, blood vessels, bones and cartilage; your body needs folate to make DNA and other genetic material. Your body also needs folate for your cells to divide.

Costings: Overall, the dish is very cheap. Specifically, per portion as the portion sizes are small. There are no ingredients within the dish that are particularly expensive, as they are mostly store cuboard ingredients such as flour and sugar. The only ingredients that could be described as slightly more expensive are the dairy ingredients, like butter and milk. That the minute, dairy products have inceased in price massively as a result of the energy price increase because dairy products require a huge amount of energy to produce. However, as they are used is small quantities in this dish, there as still fairly reasonable. The price may increase more expenisve, higher quality ingredients were used or if different additions were made, for example if you used high quality vanilla beans instead of vanilla extract or if you chose to include chocolate in the dish. However, even if these changes were made the dish overall would still be inexpensive as the majority of the ingredients annot be changed for high end ingredients, for example flour there is not much difference between high end and cheaper flours in both quality and price.