



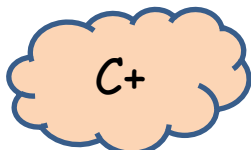
Name:..... Target Grade:..... Teacher:.....

**Remember this guide shows minimum content!**

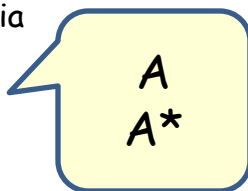
	Hand in	Max Marks	Formative Assessment	Summative Assessment	Approx GCSE Grade	RL Grade	Comments
A. Investigating the Design Context	May 30th	8					
B. Development of the design proposals	July 17th	32					
C. Making	Dec 17th	32					
D. Testing and Evaluation	Feb 20th	12					
E. Communication	Feb 20th	6					

## How to use this Guide:

1. Where you see a 'callout' like this, ensure your folder page includes this information, it is essential for grades C & Above.



2. This 'callout' identifies key A & A\* grade criteria



**Use of correct English!**  
Throughout your folder consider the best use of your English skills, think before you write! Remember sentences, full stops, grammar and capitals

Also consider 10-20% of marks are for 'Quality of Presentation'

- 1> Design Brief and Analysis
- 2> Existing Products Research
- 3> Specific Design Brief Research
- 4> Questionnaire
- 5> Research Analysis
- 6> Design Specification
- 7> Initial Ideas (8 in total, 4 per page)
- 8> Planning & Evaluation (x6 Ideas) 8a 8b 8c
- 9 > Development 1
- 10> Development 2
- 11> Development 3 - Final Idea
- 12> Evaluation of Development
- 13> Production Plan Flowchart
- 14> Controlled assessment diary
- 15> Testing by Client/Target group
- 16> Evaluation

**A**

**B**

**D**



## Controlled Assessment Criteria (Paperwork)

### **Investigating the design context**

Design Brief and Analysis

Existing Products

Specific Design Brief Research

Questionnaire leading to user profile/target market

Research Analysis

### **Development of design proposals (inc modeling)**

Specification including ( social, moral, industrial, environmental)

Initial Ideas 1 (inc annotation & analysis)

Initial Ideas 2 (inc annotation & analysis)

Recipe 1 & 2 Planning + Evaluation

Recipe 3 & 4 Planning + Evaluation

Recipe 5 & 6 Planning + Evaluation

Modeling

Development 1: Environmental & Sustainable Issues

Development 2: Details, proportions & shape

Development 3: Final Idea

Evaluation of Development & Ingredients List (inc functions)

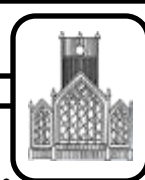
Flow Chart/Production Plan Using QC/QA

Controlled Assessment Diary (inc Photos)

### **Testing and evaluation**

Testing By Client (3rd Party Testing)

Evaluation ( Spec v's Evaluation inc Questionnaire)



**Page 1 - Title Page - No marks for this sheet, but it is the first page the examiner will see so make it IMPRESSIVE! Include: -**

1. AQA Food Technology
2. Ecclesfield School - 36574
3. Candidate Name and Number (leave space if you do not know it)
4. Title of Project
5. Year of Entry eg: 2011

**\*\*Border pages\*\***

Ensure your name is included on every sheet!

**Page 2 - Contents Page (complete prior to the final hand in)**

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# TASK ANALYSIS

### What is in the lunchbox?

Many children take a packed lunch to school. Develop ideas for products that children would be happy to find in their lunchbox and consider how they would need to be packaged to keep them safe and fit to eat.



**Skills** - In able to do the task of developing ideas for children's lunchbox, I will need to consider the skills I have. During year 10, I learnt how to make a variety of products such as biscuits, pastry, cakes etc. I will decide on the product I want to make and see if I have the skills to do this. Also, I may need to do research on any extra skills so I can practice and develop new skills.

**Target Group** - After completing research, I will need to decide the target age group I want to produce my products for. I will have to choose between infant, Junior or Senior school children and what year group to produce lunchbox ideas for. I will need to take into consideration the sort of foods and amounts of food the age groups need. The older the child, the more energy they need.

**Time** - In order to produce ideas for a children's lunchbox, I will need to think about the amount of time I have to make the products. I will have 2 hours, including lunch time, to produce a product, so I will need to consider if I am able to make my idea during the time available. When I do my research, I will have to find out how long particular foods take to cook.

**Cost** - I will need to think about the total amount of money needed to make the product. This will include the ingredients, packaging and decorations of it. The product will need to have a suitable final cost in order for the parents to buy the products. I will need to do questionnaire and interviews to see how much parents are willing to spend on their children's lunchbox

**Storage and High Risks Foods** - I will need to consider how I am going to store my product. As a child will leave their bag in a cloak room for a few hours before lunch, the product will begin to get warm; it must be made safe to eat. To make it safe, high risks foods which contain protein must be kept at the correct temperature of below 5°C to prevent food poisoning. High risk foods include meat, fish and eggs, so if I decide to use any of these foods in my product, I would need to use cool storage such as ice blocks.

**Packaging** - When thinking about my product, I will need to do research what is suitable product, I will need to decide what material to use to give it support and easily contains product. Also, I will need to research the best packaging to make it environmentally friendly and can be recycled. As it will be in a child's lunchbox, I will need the packaging to be lightweight.

**Allergies** - I will need to research different allergies and take these into account, whilst deciding on the ingredients of my product the ideas which I might consider are nut free, wheat free and colouring free. There is an increase in allergies in the country, I will do questionnaires or survey to see if more products can be used.

**Nutritional Needs** - it is vital for children to have a balanced and they are taking in their daily intake of all the nutrients. It is not suitable to use additives such as food colourings as this may cause hyperactivity. I will avoid cooking my foods in fatty substances as this could make the product unhealthy. Children's bones are still developing, so I will use protein in my product for growth. It is important for children to have five portions of fruit or vegetables in their diet, so I will use at least one portion in my product.

**Originality** - I will need to think of interesting ideas to make my product original and stand out to the audience on the shelves. Using the skills and knowledge I have, I will create a product which is different and skilful.

**Likes and dislikes of children** - I will need to think about how children like their food, they are more likely to eat the food if it is interesting instead of plain. Younger children enjoy their food having shapes and being colourful, they do not like it being boring. In my research, I will have to find out what different age groups like, I will include this in a questionnaire.

**What parent's want** - Parents will want their children to have a healthy diet and not eating too much fatty food or sugary foods. Also, parents would like their children to have enough food to prevent them from getting hungry during the day. I will do a questionnaire to find out what parents would like their children to eat and I will consider this when choosing my product.

**Recipes** - In my research, I will need to look at a variety of different recipes to get ideas for my final product.

**Equipment** - I will need to consider the equipment available to make my product, when I am looking at recipes for ideas, I will have to see what equipment is needed to make it.

**Appearance** - Most children want their food to be different and look nice to eat. The child will need to like the look of the food in able to eat it. To make my product more appealing, I will make it in an original shape and make it colourful, but I will not use and additives such as food colouring.

**Size and shape** - In my research, I will need to find out appropriate portion sizes for children of different ages, I will need to make sure the portion size is not either too big or too small. Also, the product will need to fit easy into a lunchbox so I will make sure it is not too big. Also, I will give it an interesting shape to attract more children.

**Dietary needs** - Whilst doing my research, I will need to consider if my product is going to be suitable for dietary needs such as religious needs or vegetarians. Also, I would think whether I wanted to make my product appropriate to people with health problems. E.g. Diabetes or Irritable Bowel Syndrome.

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## What you need to think about:

**1: Find a minimum of 5 appropriate products for your design brief.**

**2: Using the titles below analyse the products you have found.**

### Ingredients:

What has been used, how they work together, suitability of ingredients.

### Flavour / Extra ingredients/ Detail:

Why is this product interesting/exciting, what makes the recipe unique/stand out, what detail defines this product .

### Environmental Pro's & Con's:

Can the packaging be recycled, does it use environmentally friendly products, Can sustainable ingredients be used in the manufacture, how far do the ingredients have to come.

### Nutrition:

Carbohydrate, fat, protein, vitamins, minerals. What nutrients do the main ingredients provide in the recipe.

### Target Market:

What is the target market of the product and why, how could this be changed.

### Cooking Instructions:

How is it cooked/assembled, does it require special equipment?

### Storage:

Freezer, fridge, cool dry place

### Cost:

## Exemplar Work:

### Supermarket Survey

I am doing a Supermarket Survey to find a range of products that are connected with Italy as my coursework is related to Italian products. I will be trying to find some healthy products that contain ingredients high in fibre such as wholemeal pasta and flour. This supermarket survey should help me find some suitable products so that I can also produce a similar one. This will give me an idea of products and ingredients already selling in supermarkets.

Name of Product	Description of Product	Pack aging used	Cost	Storage of Product	Instructions for use
Sainsbury's pizza bases, classic Italian	Sainsbury's bases are made in Italy using traditional ingredients.	Heat sealed	£1,00	Store in a cool dry place. Once opened keep refrigerated, Consume within 24 hours	Simply add a topping of your choice and bake. Serve with crisp green salad.
Sainsbury's Wholemeal Mozzarella & Tomato Pizza	A healthier option high in fibre. A high fibre pizza with added seeds. Freezable, Vegetarian.	Box	£2,39	Keep refrigerated.	Oven cook from chilled or frozen.
Debenhams	Dish course herring	Tin	£1.90	Keep	Heat from chilled in 5

What have you learnt from this page:

### Objectives:

**A-A\* > Detailed analysis of relevant existing products**

**C+ > Good analysis of relevant existing products**

**C > Limited analysis of relevant existing products**



## Ecclesfield School - Department of Design and Technology (Food Technology)

### Supermarket Survey

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Sainsbury's Wholemeal Mozzarella & Tomato Pizza	A healthier option high in fibre. A high fibre pizza with added seeds. Freezable, Vegetarian.	Box	£2.39	Keep refrigerated.	Oven cook from chilled or frozen.
Sainsbury's Neapolitana Sauce	Rich sauce brimming with tomatoes and a hint of basil and oregano originally from the Campania region. Suitable for vegetarians & vegans. Freezable.	Tub	£1.39	Keep refrigerated. If freezing, freeze on day of purchase and consume within 1 month. Defrost thoroughly and use within 24 hours. Once thawed do not re-freeze.	Heat from chilled in 5 minutes. Empty contents into a saucepan over a moderate heat for 5 minutes stirring frequently. Microwave from chilled in 5 minutes. 1. Remove lid and replace loosely on top of pot. 2. Place on a non-metallic plate and microwave on full power for 2 minutes. 3. Stir well, replace lid loosely and microwave on full power for a further 2 minutes. 4. Leave to stand for 1 minute and stir well before serving.
Sainsbury's fresh Gnocchi	Rough textured potato gnocchi, ideal served with fresh pasta, vegetarian	Heat sealed	£0.97	Keep refrigerated. Once opened keep refrigerated and use within 4 days. Do not exceed use by date.	Boil from chilled for 2-3 minutes.
Sainsbury's Italian Salad	Washed and ready to serve. Succulent baby leaves with rocket and lamb lettuce. Washed in spring water.	Heat sealed	£1.45	Keep refrigerated	Use in pasta dishes or drizzle on top with dressing.
Sainsbury's fresh tortellini, garlic and herb	Rich blend of Italian cheeses and garlic, fresh egg pasta, lightly seasoned with parsley and nutmeg. Vegetarian.	Tray and heat sealed	£1.35	Once opened keep refrigerated within 4 days. Do not exceed use by date.	Cook from chilled for 1-2 minutes.

### Evaluation

As I went through the products in the Supermarket Survey, I saw quite a few 'be good to yourself' products which were connected to the Italian theme. Because Sainsbury's are bringing more healthy products in, this tells me that my product may sell well because it will be healthy and contain fibre.

I found some great products such as pizza bases which use the plain flour as a source of fibre. This is a great product and may be popular to sell as it is only £1.00 per box. This can just be topped off with all the favourite toppings such as cheeses, sauces, high fibre vegetables and then just grilled. The product is quick and easy so it is suitable for people who are busy or for parties.

I also found another pizza but already made with the sauce and topping. The base is made with wholemeal flour which is an excellent source of fibre. This product may be popular for people who are concerned about eating fibre in their diet. It may not be as popular as the normal bases but this is a great product to try out because it is healthy and also quick to prepare.

Vegetarian Lasagne with wholemeal pasta also seems to be a popular choice. I could develop this further using different vegetables or meat to create an option for meat eaters. This would be nutritious due to the content of fibre in the pasta so it may sell very well in supermarkets. I will add a similar or the same ingredient in my product so that it has the same effect. I Supermarkets as the products already selling.

I found a product of fresh Gnocchi which is made from a well known fibre source, potato. This is good to sell in Supermarkets but may not be as popular because it isn't a very well known product and can be disliked easily.

Overall, the supermarket survey has helped quite a lot by giving me lots of examples of products that I may want to create in my own way for my Italian product. I may use many ingredients here and also see what kind of prices the products are selling at. I can now test one of the products to analyse it.

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## What you need to think about:

If you are producing a project that needs to be for a specific purpose/target group or retail outlet, it will need to be research relating to that theme. You might need to consider size, ingredients special diets, flavourings, nutrition, fairtrade (ethical issues), packaging etc...

This sheet is partly research, analysing, and developmental as you are showing how you intend to design your work relating to existing products on the market.

Important factors to gain from the sheet;

- 1.Design issues
- 2.How you intend to use the information
- 3.Conclusions
- 4.Design proposals
- 5.Where you attained your information.

## Exemplar Work:



What have you learnt from this page:

Client Opinions:

Levels For page:

- 0-2 ~ Minimal analysis of other products or systems undertaken
- 3-4 ~ Some analysis of related products or systems undertaken
- 5-6 ~ Good analysis of relevant products or systems undertaken
- 7-8 ~ Detailed analysis of relevant existing products or systems undertaken related to design intentions





## Ecclesfield School - Department of Design and Technology (Food Technology)

# INTERNET RESEARCH

### The BBC website tells us a child's lunchbox should contain:

- a source of protein to keep children alert
- complex carbohydrates for slow-release energy
- calcium for growth, healthy bones and teeth
- fruit and vegetables for vitamins and minerals

**Protein:** Make sandwiches using protein fillings such as chicken, egg, ham, tuna or cheese or make salads such as Chicken Caesar salad or Tuna pasta salad.

**Fruit and vegetables:** Health experts recommend that we include five portions of fruit and vegetables in our diet every day. Whole fruit may not be that appealing to youngsters, so try cutting fruit into chunks and threading it onto skewers at the stove. Include dried fruit too - dried apricots in particular are rich in vitamins and minerals.

**Carbohydrates:** Carbohydrates (such as those in white bread, biscuits or cakes) provide instant, short-lived energy. Complex carbohydrates release calories slowly and help to keep up energy levels and concentration such as wholemeal bread, pasta, brown or rice. Pasta or rice salads make a nice change from sandwiches.

**Iron:** Iron is a mineral that helps to keep red blood cells healthy. Insufficient iron can lead to iron-deficiency anaemia, which is particularly common among young girls. Good sources of iron include red meat, liver, egg yolk, corned beef, fortified breakfast cereals, beans and pulses. To help absorb the iron more effectively, combine with vitamin C-rich foods such as citrus fruits, fruit juice, tomatoes and green leafy vegetables.

### Sainsbury's

#### Lunchbox basics

Here are some ideas for packing a healthy lunch, to support a good bedtime night. To make sure the lunchbox contains one portion for each of the following food groups:

- **A good portion of starchy food**  
Crumpet/bread, a whole (not bread) potato made up in the (optional) salad, wholemeal pizza, toast, pasta, rice, cereals
- **Add some protein**  
Tuna, fish, chicken, egg, cheese, nuts, seeds, beans, peas, lentils
- **A portion of dairy**  
Cheese, yoghurt, milk, porridge, smoothies or yogurt with alternatives
- **Some fruit and veg**  
Apples, grapes, strawberries, dried fruit, cereal with berries, sticky date
- **Don't forget the drink**  
Water/hydrogenated milk or unsweetened fruit juice or milk

- **Tips on reducing your child's salt intake**
- **Useful information about food allergies and intolerances**



Here I have got a picture of a child's lunchbox, this will give me inspiration as the foods are shaped and have original ideas. They are also colourful which is what a child would like to see in their lunchbox.



Children are encouraged to eat 5 fruit or vegetable a day; this will help me to design my product as I will include fruit or vegetables to insure they have an intake of this type of food. It is important to eat 5 a day because they are packed with vitamins and minerals; they are also an excellent source of fibre and antioxidants.

### ENERGY AND NUTRIENT REQUIREMENTS

The energy requirements of children increase rapidly because they are growing quickly and becoming more active. They have a high energy requirement for their size. To get this energy intake, foods which are high in energy, rich in nutrients and eaten as part of small and frequent meals may be necessary for younger children (e.g. 4-6 year olds), who do not have large enough stomachs to cope with big meals.

A good supply of protein, calcium, iron and vitamins A and D is also necessary for children. Calcium is needed for healthy tooth development and, vitamin D, helps make bones stronger. Childhood is an important time for tooth and bone development.



Here there are a variety of shaped breads, which gives me ideas of shaping bread as this will attract children more.

### Ten Top Healthy Lunch Box Tips

1. Dress the main part of the lunch in starchy foods like bread, cereal, rice, pasta or potatoes.
2. Get creative with some alternatives to sandwiches, for example, wholemeal pizza pockets, tortilla wraps or pasta salad.
3. Include some protein such as lean meat, chicken, tuna, fish, cheese, egg or hummus.
4. Aim to have at least one fruit or vegetable based food or drink in the lunch box to count towards your child's five a day and vegetable portions a day.
5. Children need to eat regularly to maintain energy levels, so don't forget to include a snack. This might include a treat such as a piece of fruit, a small packet of crisps, crackers with cheese, a biscuit, yogurt, smoothie, strawberry, or milk or chocolate.
6. Add a portion of semi-skimmed milk or other dairy food such as cheese or fromage frais.
7. Drinks are an important part of a child's diet. Try a variety of different drinks such as a carton of full-fat, natural, yoghurt or milk drink.
8. Try the re-imagined versions of your child's favourite foods - a healthy lunch box does not mean giving up all the foods children enjoy.
9. Check out the Guidance Daily Amount (GDA) information on the front of many food products and experiment with some different choices.
10. Prep a food pack or a frozen drink in the lunch box to keep a cool and remember to wash hands before preparing and eating food.

Here I have got the top ten hits for a healthy lunchbox. This will give me ideas for my product as it is a suggestion for foods which are useful to provide the children with a nutritional diet.

### Some healthy lunchbox treat suggestions:

- Yogurt, fromage frais or rice pudding - try the reduced fat options
- Individual packets of dried fruit e.g. raisins or apricots.
- Individual portions of cheese.
- Plain biscuits, bread sticks or crackers.
- Smoothies.
- Popcorn - unsalted and unflavoured.
- Fresh fruits (if fresh), mini box of fruit and dried fruits or fruit mix.
- Raw vegetables such as baby carrots or sliced cucumbers with healthy dip like hummus are easy to pack.
- Make homemade lunchables using wholegrain crackers, sliced cheese and lean ham.
- Remember it is ok to give your child treats like chocolate, sweets and snacks now and again - just not too often!

### ISSUES HEALTHY LUNCH

Here are some ideas for delicious and healthy sandwich, wrap or pitta bread fillers:

- Use tuna beyond it spring water or low-fat versions, but watch the mayonnaise. Use the reduced-fat or fat-free mayonnaise.
- Peanut butter, although relatively high in fat, contains healthy monounsaturated fat, which will not adversely affect blood cholesterol levels. Try it with jam or (careful for safety).
- Add cheese for additional calcium, especially if your child doesn't drink milk.
- Healthy toppings can include lettuce, mustard, BBQ sauce, salsa, reduced fat cream cheese, tomatoes and low fat salad dressings. Just watch your serving size!
- Spreading wraps with a little reduced-fat cream cheese or soft cheese, filling power and make it easier to eat.

Exemplar 2 Research - Internet

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## What you need to think about:

- They must ask specific / relevant questions
- There must be at least 20 people asked
- You must show your findings in a bar/pie chart produced to show your findings.
- You must analyse the data and sum up what you have found from the questionnaire.

### 1. How much are you willing to pay for a prepared meal for a family?

- £1 - £2
- £3 - £4
- £5 or more

### 2. What sort of food groups are you most interested in, for your prepared meal?

- Veg and fruits
- Fat and sweets
- Carbohydrates and proteins
- Dairy and fibre

### 3. How much preparation are you willing to take up?

- Short time (10 – 20 mins in Microwave)
- Medium time in oven (45 mins)
- Up to an hour in oven

### 4. What's your favourite meal, providing all the food groups?

- Pizza, veg and desserts/pudding
- Fish Pie, veg and a dessert of your choice
- Casserole, veg and cheese + biscuits or sweet dessert.

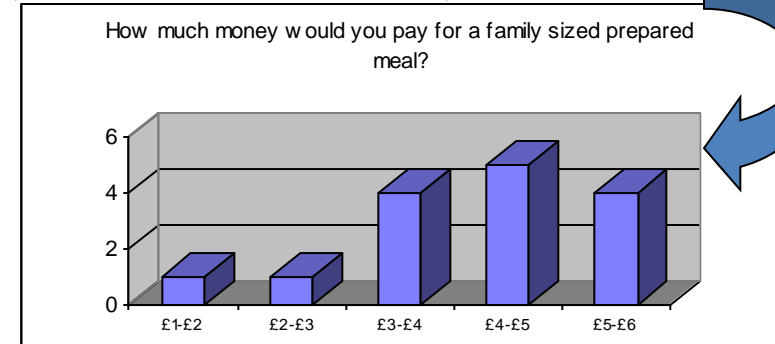
### 5. What do you expect the prepared meals to come in or look like?

#### Will it be recyclable?

- Cardboard with 4 sections with plastic cover
- Plastic with 3 sections with plastic cover
- Average size box
- Average size trays

## Exemplar Work:

1	How much money would you pay for a family sized prepared meal?	
	£1-£2	1
	£2-£3	1
	£3-£4	4
	£4-£5	5
	£5-£6	4



## What have you learnt from this page:

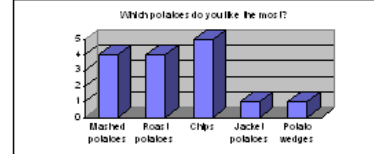
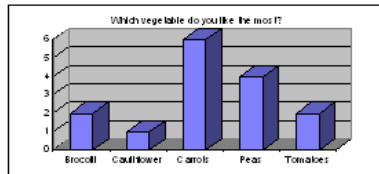
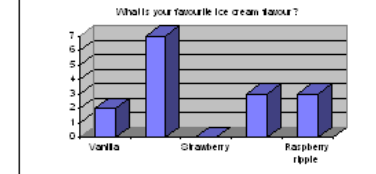
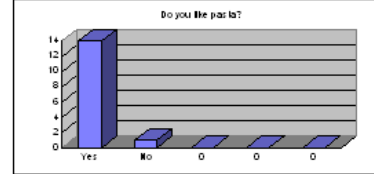
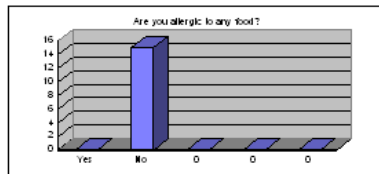
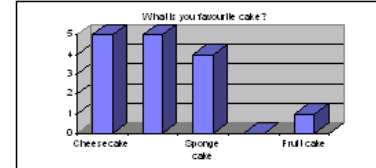
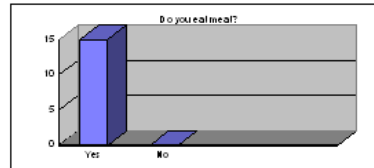
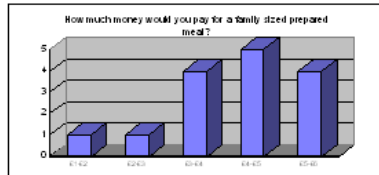
## Client Opinions:

## Levels For page:

- 7-8 ~ Target market identified and the intended consumer/user profiled
- 5-6 ~ Target market for product has been identified
- 3-4 ~ Some consideration has been taken of the likely consumer/user
- 0-2 ~ Limited understanding of the target market/user evident

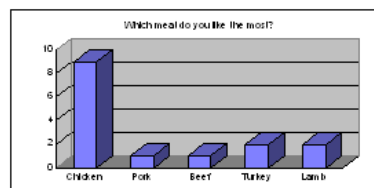
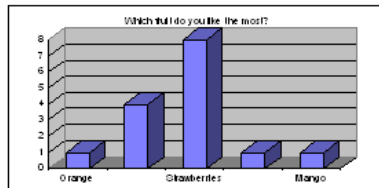


## Questionnaire

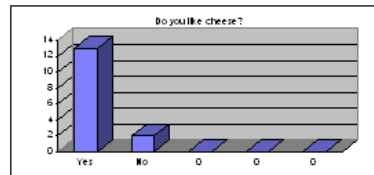


My results say that nobody was allergic to any food and everybody ate meat. Also most of the people like pasta.

Most people would pay £4-£5 for a family-sized ready meal. Carrots are the most popular vegetables, strawberries are the most popular fruit, and chips are the most popular type of potatoes.



This information is useful because I know what foods most people prefer, so therefore I know what food is best to include in my final product. It also tells me what food people don't eat so I know which food shouldn't be included.



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## What you need to think about:

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This is where you collate (pull together) All the Information that you have discovered in your research. Documenting all your findings and how This can assist you in you designing process.

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Your page will have your conclusions from the following pages:

- Existing products
- Existing Products
- Specialist / Componentry research
- Questionnaire leading to user profile / target market

From these pages you need to bring together all your conclusions and analyse how you are going to use them in your further work.

## Exemplar Work:

### Research Analysis

#### Questionnaire Results

##### **What I have found out:**

I have found out the public's choice of some Italian ingredients such as different pastas, sauces, toppings, etc. By looking at the top scores for each question I may use those particular ingredients in my product. For example the question that asked which pasta they preferred better turned out to be spaghetti. Now that I know the choice of pasta they liked best, it could have a good chance of being one of my main ingredients in my Italian product.

##### **How it will help me design:**

This should help me to design my overall product by looking at what the public prefer best so that I can add some of their choices in my product. The reason for doing this is for the product to sell well in supermarkets because I have put into mind what the public's choices are. When I am designing I should remember to put atleast one choice of the public in my product so that part of it was reflected on other people's ideas.

## What have you learnt from this page:

## Client Opinions:

## Levels For page:

- 0-2 ~ Provided little evidence of research and analysis of context
- 3-4 ~ Made a superficial analysis of most of the research material and the context
- 5-6 ~ Good analysis of relevant research and context
- 7-8 ~ Detailed analysis of relevant existing products or systems undertaken related to design intentions



## Analysis of Research

### Mood board

#### What I found out:

I found many variations and different examples of Italian products from daily magazines. The images of the products show me that there is a massive range out there in which I can use for my own product. By looking at the mood board I can be easily influenced by the different products and styles used by other people's ideas in producing what they think are Italian. I have also found out that by looking at the mood board the appearances matter to create your own image so I can think about how I should present my own as good as the ones in the mood board. Also it gives me many ideas for example not just making pasta dishes but make something completely different like a pizza or salad.

#### How it will help me design:

The mood board will help me identify the different ingredients used in the images such as pasta, cheese bread, vegetables, etc. This is very useful because I can use some of those ingredients in my own product for a better flavour and look. Also the way people present their food in the magazines will help me decide how I want my product to look like so that when it is sold, it will look attractive and appetising which should help it sell.

### Questionnaire Results

#### What I have found out:

I have found out the public's choice of some Italian ingredients such as different pastas, sauces, toppings, etc. By looking at the top scores for each question I may use those particular ingredients in my product. For example the question that asked which pasta they preferred better turned out to be spaghetti. Now that I know the choice of pasta they liked best, it could have a good chance of being one of my main ingredients in my Italian product.

#### How it will help me design:

This should help me to design my overall product by looking at what the public prefer best so that I can add some of their choices in my product. The reason for doing this is for the product to sell well in supermarkets because I have put into mind what the public's choices are. When I am designing I should remember to put atleast one choice of the public in my product so that part of it was reflected on other people's ideas.

### Supermarket Survey

#### What I have found out:

I have found many different products linked to the theme of Italian. I have seen the prices, quantities and ingredients that popular supermarkets have used such as Sainsbury's. By looking at their detailed description and ingredients of their product, has given me a few ideas for my own product. I have also found out the different ingredients they have used that I have never seen before such as tortellini. I have also seen their 'be good to yourself' range for a healthier option which has shown me some special ingredients low in fat and high in fibre.

#### How it will help me design:

The 'be good to yourself' range has helped me a lot by showing the kinds of ingredients they have used for a healthier option. Because my whole product is based on a healthier option and should contain a good source of fibre in, the supermarket survey has helped me identify those useful ingredients in which I can use in my product. Also to make my product a bit more interesting, I can use an unusual ingredient in my product that has been used in one of the products sold by Sainsbury's.

### Fibre Research

#### What I have found out:

I have found out what fibre is and the effect it has on in the body such as the bowel and the way it helps remove waste in the intestines. I have found out that without fibre the removal of waste can be incredibly difficult and can cause serious illnesses such as cancer. I have also looked at a list of everyday ingredients and their content of fibre such as bread, flour and other ingredients that can be used in my Italian product.

#### How it will help me design:

By researching in depth about fibre I have decided that my product should contain fibre in it as a healthier option in supermarkets. This may become popular as today's generation is into a healthier diet, I can look up in a list of some Italian ingredients to see whether they contain enough fibre to use for my product. I could use high in fibre ingredients such as wholemeal bread or pasta that can be used in pasta dishes or a pizza.



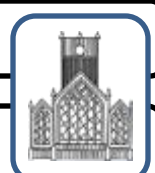
Candidate Name :

Candidate No.

Centre No. 36574

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# Development of the design proposals: Design Specification



What you need to think about: **All points should be measurable, this is what we finally evaluate!**

## Target Market Group

1. Who is the target market?
2. Look back to your research
3. You defined this with your questionnaire
- 4.....
- 5.....

## Labelling

1. What's in your product?
2. What nutritional content?
3. What warning/advice will be included?
- 4.....
- 5.....

## Size/Shape

1. Are there any restrictions?
2. Specify a general size
3. Is there a limit in the workshop?

## Weight

1. Is it important?
2. Will customer be able to carry it?
3. What are competitor's products?
- 4.....
- 5.....

## Number of servings

## Shelf Life/Storage

1. How long will it last?
2. Can it be resealed/packaged?
- 3.....
- 4.....
- 5.....

## Aesthetics (look at questionnaire)

1. How the product should look
2. Flavour and texture
3. How will the packaging look?

## Ingredients

1. What is appropriate, be specific?
2. Specific requirements i.e. dairy free
3. Are they easy to source?
4. Are they good quality?
5. Will they give required finish?

## Safety

1. Will there be any allergies?
2. Are there hygiene issues?
3. Look at [www.bsieducation.org/Education](http://www.bsieducation.org/Education)
- 4.....

## Cost

1. Is there a limit for TMG?
2. What is cost of similar product?
3. What will customers pay?
- 4.....
- 5.....

## Green Issues (look at questionnaire)

1. What can be recycled?
2. Will packaging be recyclable?
3. Will recycling symbol be included?
- 4.....
- 5.....

## Manufacture (look specific research)

1. Are specific ingredients required/excluded?
2. What is scale of production?
3. Are specialised production techniques required?

## Packaging

1. Does product need to be waterproof?
2. Does it need to be airtight?
3. Does packaging promote product?
4. Is product easily damaged?
5. Will POS be required?

Exemplar Work: The difficult ones...

Justify importance

## Target Market Group

- 1.(E) Product should appeal to 16-18 year old males, as defined in my questionnaire
- 2.(D) Product to be nutritionally balanced, similar to 'product x' in my product analysis because
- 3.(P) Target market have an increased bias towards recyclable/sustainable products this is referenced in my product analysis
- 4.(E) Cost it should cost no more than....to produce
- 5.(E) It should be stored in a cold place and will last for ....

Each point is fully justified

How to ID points

Refer to your research!

Refer to sustainability

Importance > E=Essential D=Desirable P=Possible

## Objectives:

**A-A\*** > Fully detailed and justified specification taking full account of analysis

**C+** > Specification is complete and reflects key aspects of the analysis

**AQA Criteria - Identify which points are: - ESSENTIAL / DESIRABLE / POSSIBLE!**



## Ecclesfield School - Department of Design and Technology (Food Technology)

### Design Specification

From the research I have done, I will need to make sure that my product includes all of the points listed below.

- **Number to save-** My Italian product will serve about 4 people.
- **Packaging-** For wet products such as pasta, I am going to package them in a rigid plastic tray, sealed with a film lid. This will then be covered with a paper cardboard sleeve that includes all the information about the product. It should be suitable to reheat. For a dryer product such as a pizza, I will wrap it with a soft plastic material that also has information about the product.
- **Labelling-** The labelling will include: the name of the product, the name of the manufacturer/seller, the ingredients, description of the product, best before date, allergy advice, nutrition table and maybe a serving suggestion.
- **Appearance-** Appearance should look attractive, appealing and appetising to eat.
- **Taste-** The taste should have a traditional blend of Italian ingredients because my product is based on Italian dishes.
- **Texture-** To have a good texture I will cut the vegetables in different sizes and also use a different kind of pasta for pasta dishes. The sauce should be smooth.
- **Nutrient content-** The nutrient content in my product should be good so I want my product to be part of a healthy meal. It will be high in fibre and also protein.
- **Cost-** The cost will be based on my results from the Supermarket survey. It will cost about £3-£6 due to the big portion size and ingredients used.
- **Storage-** For storage my product should be put in a refrigerator at 5 degrees centigrade. It can also be frozen.
- **Shape-** The shape of my Italian product will be put in a round plastic mould.
- **Who might buy it?** - People that may buy my product are families who want a meal from the supermarket and the portion size is suitable for them. Also adults after a hard day of work may want to grab something from the shelves for their lunch or supper. The product will also be great for healthy eaters because it contains fibre and protein.

- **Environment-** While making my product, the environment will have the HACCP system in operation to ensure the product is produced in a safe and hygienic condition.

### Design Ideas Brainstorm

I will design several Italian dishes using the design specification. They will have to high in fibre. Here are some of the dishes I may design.



I will be using many traditional ingredients used in Italy such as tomato, cheese, herbs and vegetables. These ingredients are the basis of the dishes I may design.



Candidate Name :

Candidate No.

Centre No. 36574

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# Development of the design proposals: Initial Design Ideas 1 & 2



What you need to think about: 2 pages (A3) of creative **INITIAL** design ideas 4~6 per page

1. These pages should be in 'Sketchbook' hand drawn format!

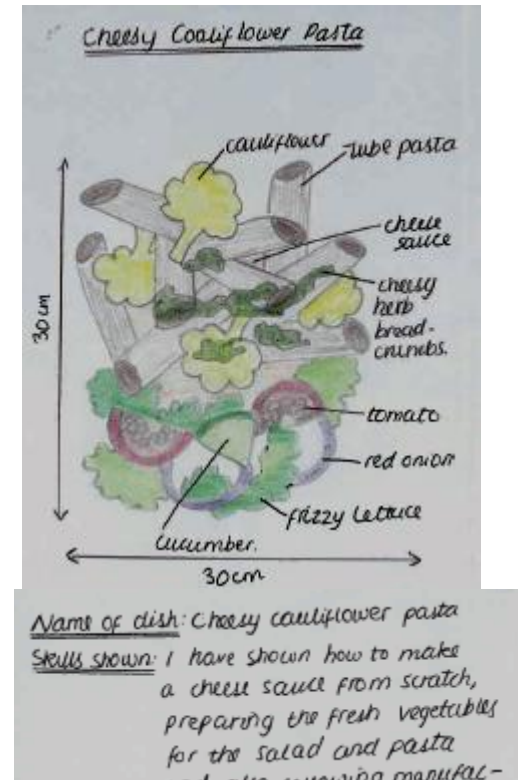
**A minimum of 8 initial ideas should be drawn**

2. When sketching idea's remember.....
  - a. Sketch freehand lightly
  - b. Define outline
  - c. Render idea using pencil crayons, **not felt tips!**
  - d. Consider using fine-liner on outline
  - e. Fully **ANOTATE** ideas
3. Annotating is adding a short paragraph about features of the idea that cannot be determined by simply looking at the sketch. These may include: -
  - a. Notes on how design meets specification
  - b. Notes on ingredients
  - c. Processes/method required
  - d. How easy the product is to make
  - e. What finish is to be used
  - f. Possible allergy ingredients
  - g. How the product could be developed
4. Add detail views where required

**5. Evaluate initial idea's and chose idea(s) to DEVELOP - Include conclusion!**

**AQA Criteria - Evaluative annotations are ESSENTIAL!**

## Exemplar Work:



## What have you learnt from this page: *Client Opinions:*

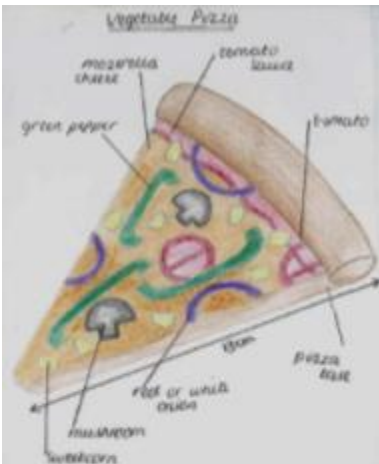
Levels For page, tick the level of YOUR work: -

- 26-32 ~ Imaginative and innovative ideas have been developed, demonstrating creativity, flair and originality. Further developments made to take account of ongoing research
- 19-25 ~ Imaginative ideas demonstrating a degree of creativity, which are further developed to take account of ongoing research
- 12-18 ~ Design ideas show some degree of creativity and further development
- 6-11 ~ Ideas show some variation in approach or concept
- 0-5 ~ Ideas are lacking in imagination, minimal development or further research





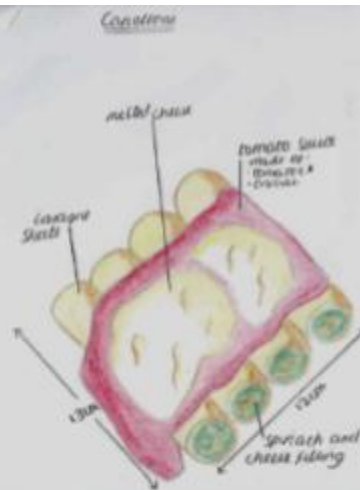
## Ecclesfield School - Department of Design and Technology (Food Technology)



Name of dish - vegetable pizza  
Skills shown - I have shown how to make a bread dough for the base. I have also shown how to cook on the hob by making the tomato sauce. I have shown how to prepare vegetables for the toppings. I have shown how to cut the cheese in thin slices.

How would you improve the dish - I would use a mixture of wholemeal and plain flour for the base instead of just plain. I would also add some tomato puree in the tomato sauce so that it has a thicker and tastier. I would add as many vegetables as possible on the filling of my pizza.

Conclusion -  
 I am going to prepare this dish because it had the most votes in the questionnaire. I am also making it because it is a traditional pizza in the base which is high in fibre so it matches my bag.



Name of dish - cannelloni  
Skills shown - I have shown how to make fresh pasta sheets and then rolling them up to make tubes. I have also shown how to cook on the hob by making the tomato sauce for the filling and also the tomato sauce for the top. I have shown how to prepare vegetables such as courgette and sprouts.

How would you improve the dish - I would use wholemeal and plain flour to make the pasta instead of plain. I would also add more vegetables in the filling instead of just one.

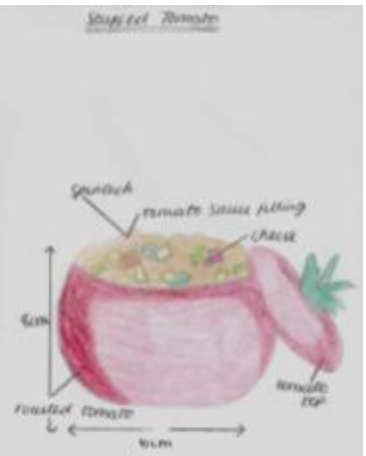
Conclusion -  
 I am going to make this dish because I have never tried it before so I want to make something different. This dish is definitely an Italian dish and it also looks very interesting so I will be making it.



Name of dish - vegetable lasagne  
Skills shown - I have shown how to use the hob by boiling spaghetti and also preparing the sauce. I have also shown how to cut vegetables that are included in the sauce. I have shown how to garnish the dish with herbs so that it looks better.

How would you improve the dish - I would use wholemeal pasta for the dish so it contains a lot of fibre. I would also use lots of different vegetables to make it more interesting and healthy.

Conclusion - I will be creating this dish as it is easy to make and the ingredients do not cost very much. Also this type of pasta is very popular in the questionnaire.



Name of dish - stuffed tomatoes  
Skills shown - I have shown how to prepare vegetables by rolling the inside out of the tomatoes and cutting them some for the filling. I have also shown how to cook on the hob by making the filling for my stuffed tomatoes. I have shown how to cut the cheese in thin slices.

How would you improve the dish - I would add as much vegetables as possible and maybe add bread crumbs for the topping with herbs so that the dish has enough fibre in.

Conclusion - I am going to make this dish because it is a traditional Italian dish and it is a high fibre dish. I am also making it because it is a high fibre dish and it is a high fibre dish.



# Development of the design proposals: Planning & Evaluation



What you need to think about: **Ensure your Planning & Evaluation sheet refers to how it meets your brief/spec**

This folder page is to highlight what products you intend to make and evaluate their ability to meet the brief and specification.

Things to include:

1. Justification (why did you choose to make a particular product)
2. Annotated photo
3. Sensory Testing
4. Nutritional Analysis
5. Portion Size
6. Approximate cost to make
7. Evaluation of practical work but also against specification

**AQA Criteria - Ensure you have a wide VARIETY of modelling! + Review testing of models!**

## Exemplar Work:

**Design Idea 1**

**Vegetable Pizza**

I decided to choose this type of product first because it is healthy, contains fibre and the ingredients used in this product does not cost very much. I also chose this product because the results from the Italian Questionnaire showed that people enjoyed this product more than other Italian dishes. Another reason why I picked this product is because the pizza contains a good amount of fibre by using wholemeal flour in the base and also the variety of vegetables used for the toppings, adds to the fibre content. This will help it sell well in Supermarkets as a healthy option.

Ingredients - 75g plain flour, 75g wholemeal flour, 1/4 a green pepper, 1/4 red/white onion, 2 tbsp sweet corn, 1/4 tomato, 75g light mozzarella cheese

**Star profile**

**Nutrition Information**

		g					mg									
		Protein	Fat	CHO	Sugar	Starch	Total	NaCl	K <sup>+</sup>	Na	Ca	Fe	MA	MS	VIC	VC
g	<b>Product</b>															
g	375 Total	30	19	121	10	111	63	775	3200	535	500	5	127	0.1	60	2.1
g	<b>Per Portion</b>															
g	94	8	5	30	2	28	16	194	824	134	140	1	102	0.3	17.2	0.5

## What have you learnt from this page: *Client Opinions:*

- Levels For page, tick the level of YOUR work: -
- 26-32 ~Excellent development work through experimentation with a wide variety of techniques and modelling
  - 19-25 ~Good development work achieved through working with a variety of techniques and modelling
  - 12-18 ~Adequate development work achieved through working with a range of techniques and modelling
  - 6-11 ~Development work is lacking in detail but makes reference to a number of techniques and modelling
  - 0-5 ~Basic development work undertaken using a limited range of techniques



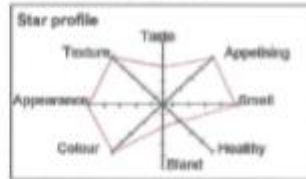
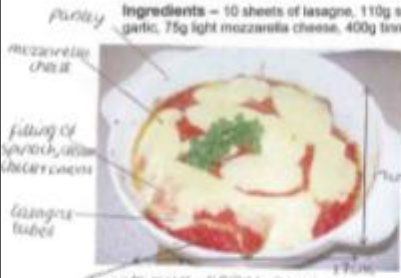
## Ecclesfield School - Department of Design and Technology (Food Technology)

### Design Idea 1

#### Cannelloni

I chose this product as my second choice to produce because it is an unusual dish and different. This fits in with my design specification because it is partly healthy, contains fibre and the ingredients used are a reasonable price. The dish follows the Italian theme.

**Ingredients** – 10 sheets of lasagne, 110g spinach, 75g cream cheese, 1/2 onion, 2 cloves of garlic, 75g light mozzarella cheese, 400g tinned tomatoes and a pinch of herbs



#### Nutrition Information

Product	Protein	Fat	Total Sugar	Salt	Fibre	Cal	KJ	Na	Ca	Fe	Vit A	Vit B1	Vit B2	Vit B6	Vit C
100g Totals	33	63	40	22	24	14	564	3004	938	798	6	7001	0.2	101	1.9
Per Portion	Protein	Fat	Total Sugar	Salt	Fibre	Cal	KJ	Na	Ca <td>Fe</td> <td>Vit A</td> <td>Vit B1</td> <td>Vit B2</td> <td>Vit B6</td> <td>Vit C</td>	Fe	Vit A	Vit B1	Vit B2	Vit B6	Vit C
218g	4	18	12	6	4	221	921	275	107	1	1060	0.1	26.2	2.0	
Per 100g	Protein	Fat	Total Sugar	Salt	Fibre	Cal	KJ	Na	Ca <td>Fe</td> <td>Vit A</td> <td>Vit B1</td> <td>Vit B2</td> <td>Vit B6</td> <td>Vit C</td>	Fe	Vit A	Vit B1	Vit B2	Vit B6	Vit C
100g	4	7	6	3	3	102	426	99	51	1	522	0.0	11.6	0.9	

Portion Size - 4

Approximate cost - £2.99

#### Evaluation

This product matches my brief and specification because it is an Italian dish, it contains fibre by the spinach, tomato and pasta. From the star profile the cannelloni dish which quite tasty from the tomato sauce and spinach filling. It looked appealing and attractive to eat because of the stringy cheese and cannelloni tubes. It smelt of tomato and cheese which were the main ingredients. The tomato sauce was healthy as well as the pasta used. It wasn't bland at all and it was very colourful. There were different textures. The sauce was smooth and the filling was lumpy. The pasta was soft and the cheese was stringy. Overall the dish was good although it could have been healthier by adding more vegetables and using less fat cheese in the filling and top.

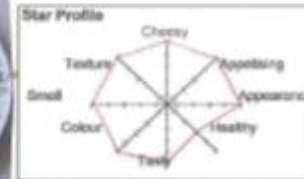
I could develop it by using wholemeal pasta instead of plain. I could add more vegetables in the filling for example tomatoes, peppers and sweet corn instead of just spinach. As the packaging I will use a rigid plastic container with a paper cardboard sleeve containing information about the product.

### Design Idea 2

#### Cheesy Cauliflower Pasta

I wanted to produce a dish that involved pasta as Italian's usually contain this ingredient in their food. I wanted to show a few techniques used to make this dish such as making a cheese sauce from scratch and cooking pasta perfectly. This dish follows my design specification because it has fibre from the pasta and vegetables, the ingredients do not cost very much and it definitely follows the Italian theme.

**Ingredients** - 1/2 cauliflower, 150g pasta tubes **Cheese Sauce** - 25g plain flour, 25g margarine, 300ml milk, 50g cheddar cheese **Topping** - 50g white breadcrumbs, 10g parsley, 20g cheddar cheese, 10g margarine, 1 tomato **Salad** - 1 tomato, 1/2 cucumber, 1/2 red onion, handful of salad leaves.



#### Nutrition Information 300g

Product	Protein	Fat	Total Sugar	Salt	Fibre	Cal	KJ	Na	Ca	Fe	Vit A	Vit B1	Vit B2	Vit B6	Vit C
300g Totals	32	36	32	12	49	8	361	4726	2036	714	4	1616	2.9	32	1.4
Per Portion	Protein	Fat	Total Sugar <td>Salt</td> <td>Fibre</td> <td>Cal</td> <td>KJ</td> <td>Na</td> <td>Ca <td>Fe</td> <td>Vit A</td> <td>Vit B1</td> <td>Vit B2</td> <td>Vit B6</td> <td>Vit C</td> </td>	Salt	Fibre	Cal	KJ	Na	Ca <td>Fe</td> <td>Vit A</td> <td>Vit B1</td> <td>Vit B2</td> <td>Vit B6</td> <td>Vit C</td>	Fe	Vit A	Vit B1	Vit B2	Vit B6	Vit C
102g	4	9	10	3	17	8	248	1027	683	1	459	0.7	13.0	0.4	
Per 100g	Protein	Fat	Total Sugar <td>Salt</td> <td>Fibre</td> <td>Cal</td> <td>KJ</td> <td>Na</td> <td>Ca <td>Fe</td> <td>Vit A</td> <td>Vit B1</td> <td>Vit B2</td> <td>Vit B6</td> <td>Vit C</td> </td>	Salt	Fibre	Cal	KJ	Na	Ca <td>Fe</td> <td>Vit A</td> <td>Vit B1</td> <td>Vit B2</td> <td>Vit B6</td> <td>Vit C</td>	Fe	Vit A	Vit B1	Vit B2	Vit B6	Vit C
100g	6	16	13	3	11	8	151	374	424	1.2	1	50	0.5	0.5	

Portion Size - 4

Approximate cost - £2.99

#### Evaluation

This product matches my brief and Specification because it is perfect for a family of four, it contains fibre, not very pricey, Italian and is a different dish you would not really find in supermarkets so it a new choice which may be a positive change. From the star profile the cheesy cauliflower pasta was very tasty by the amount of cheese in the topping and sauce. It looked very attractive and appealing to eat and could be a great dish to sell in supermarkets. The salad was an extra part of the dish which provided the healthy part. It contained a few vegetables that add more fibre to the dish. The fish had different textures from the softness of the cauliflower and pasta to the smooth sauce to the crunchy, fresh vegetables. The salad gave the dish a flash of different colours which had a contrast with the pale pasta in cheese sauce. Overall, it tasted great and also smelt good.

To develop it further I would use pasta that is high in fibre than the original I used. I would also add a variety of vegetables instead of just cauliflower and tomato. If I do produce this dish further the packaging will be made out of rigid plastic and a paper cardboard sleeve for the information.

Candidate Name :

Candidate No.

Centre No. 36574

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# Development of the design proposals: Development 1 & 2



What you need to think about: This is the page that allows you to modify 1 specific part of your recipe in a number of ways to improve the product e.g. type of flour

1. Remember only change one aspect of your recipe/dish per development.
2. These pages should be developing one aspect of your dish/product: -
  - a. Start with simple adjustments
  - b. Explain what your going to do
  - c. Show where ideas have been modified
  - d. Get other peoples opinions on your developments
  - e. Include a photo and star profile
  - f. Write about how it changes the nutritional or sensory attributes of the dish
3. Final Idea should be based around one or all of your developments and justify how the developments helped you in designing the product
4. Annotation should show how product has developed from initial ideas.

Development can be shown in many different ways but successful development happens when you choose one item and use that information to help inform your choice of final design !!

This could be;

Shape, Colour, nutritional profile, ingredients, techniques, processes, Material and so on.

**AQA Criteria -**  
Good Development is Critical

## Exemplar Work:

### Development 1 – Quiche

Development number 1

Experiment to increase the fibre content of flour in the shortcrust pastry

#### What I am going to do –

I am going to test the pastry by using a variety of flours such as plain, granary, wholemeal and brown. I am doing this to try and increase the fibre content which flour is a good source of. The flour I think is the best taste, texture and appearance will be the one I use in my final quiche.

#### Ingredients 1

50g granary flour  
50g plain flour  
50g margarine  
Cold water

#### Ingredients 2

50g wholemeal flour  
50g plain flour  
50g margarine  
Cold water

#### Ingredients 3

50g brown flour  
50g plain flour  
50g margarine  
Cold water

#### Fibre in grams –

Ingredients 3  
Brown flour

Product	Protein	Fat	CHO	Sugar	Starch	Fibre	kCal	kJ	Na	Ca	Fe	NIAC	RIAC	RIAC
100g Total	12	42	72	3	71	7	704	2942	483	99	3	768	4.6	0
Per Portion	6	21	36	1.5	35.5	3.5	352	1471	241.5	49.5	1.5	384	2.3	0
Per 100g	12	42	72	3	71	7	704	2942	483	99	3	768	4.6	0

## What have you learnt from this page: *Client Opinions:*

Levels For page, tick the level of YOUR work: -

26-32 ~Excellent development work through experimentation with a wide variety of techniques and modelling (including CAD where appropriate) in order to produce a final design solution

19-25 ~Good development work achieved through working with a variety of techniques and modelling (including CAD)

12-18 ~Adequate development work achieved through working with a range of techniques and modelling (including CAD where appropriate)

6-11 ~Development work is lacking in detail but makes reference to a number of techniques and modelling (including CAD where appropriate)

0-5 ~Basic development work undertaken using a limited range of techniques



## Ecclesfield School - Department of Design and Technology (Food Technology)

### Development 1 - Quiche

Development number 1

Experiment to increase the fibre content of flour in the shortcrust pastry

What I am going to do -

I am going to test the pastry by using a variety of flours such as plain, granary, wholemeal and brown. I am doing this to try and increase the fibre content which flour is a good source of. The flour I think is the best taste, texture and appearance will be the one I use in my final quiche.

**Ingredients 1**

50g granary flour  
50g plain flour  
50g margarine  
Cold water

**Ingredients 2**

50g wholemeal flour  
50g plain flour  
50g margarine  
Cold water

**Ingredients 3**

50g brown flour  
50g plain flour  
50g margarine  
Cold water



I have asked a number of people to give me their opinions and here's what they thought I have made

Results - Granary Flour			
People	Appearance	Taste	Texture
1	The bits stand out from the pastry Looks like a pale golden brown Floury Keeps it shape Unappetising to eat	Very buttery Salty Quite bland Malty Not cooked very much so it tastes a bit like dough Quite heavy from the amount of salty butter	Doughy Crispy Soft Bread like Hard bits in pastry from seeds
2	The seeds stand out from the pale pastry It looks quite thick The pastry looks doughy and sticky inside	Extremely buttery Not very pleasant to eat Bland	Soft bread texture Crunchy and hard from the outer layer of the grain in the pastry
3	Can see the seeds through the pastry Pale colour	Salty Buttery Uncooked a bit	Doughy Hard seeds in pastry Soft

**Fibre in grams -**

Ingredients 3  
Brown flour

Product	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Per 100g	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Ingredients 2  
Wholemeal flour

Product	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Per 100g	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1

Ingredients 1  
Granary flour

Product	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30
Per 100g	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1	0.1

Results - Wholemeal Flour			
People	Appearance	Taste	Texture
1	Golden brown colour Keeps it shape Quite fine	Salty from the butter Floury from the dough	Crunchy around the edges Thickness makes it less dry and dough like
2	Brownish colour on top Thin pieces	Buttery Crispy Bland	Hard around edges Crispy on top and bottom
3	Golden brown Appetising Brown fry bits inside the pastry Shrinks a bit	Not much taste Can taste only butter and flour	Crispy Crunchy Bite

Results - Brown Flour			
People	Appearance	Taste	Texture
1	Brown around bottom and top Better appearance to wholemeal flour	Buttery Bland Floury	Bread or cake like texture Hard and crunchy around edges
2	Golden brown Appetising	No taste Buttery	Crispy on top from the Golden brown parts
3	Medium thickness Brown colour around the outside and inside	Very bland Has some butter and salty taste	Soft Crispy

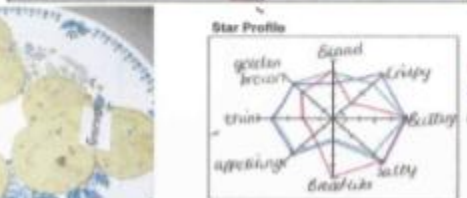
**Evaluation**

When the dough that contained granary flour was rolled out, the little hard bits were falling off. It was quite difficult to roll this flour out so when I need to place it carefully into the quiche ring then it will be very hard to do. Not only was the flour difficult to handle but it also had an unappetising texture to it which would change the whole texture of my base in the quiche. This flour took the longest to cook because of the dough and floury like texture. I think I will not use this flour in my final dish.

The brown flour was very similar to the wholemeal flour pastry. It was cooked much faster than the granary flour pastry which would be ideal to my dish. There was not very much flavour and the fibre content is not as good as the other flours with just 7g. I think this flour is not the right choice so I will not be using it in my final dish.

The wholemeal flour was the best from all the flours because it contained the most fibre from all the flours tested. It had a more suitable texture for the type of dish I will be making and it cooked faster than the granary flour pastry. The amount of fibre this flour has is 9g. The different textures make it more interesting and it was easy to roll out so I think this will be the right flour to use for my shortcrust pastry in my vegetable quiche.

Next I will be developing the filling of my quiche with different vegetables such as peas, broccoli and mushrooms. I will be using the best flour from development 1 for the base of the quiche.



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# Development of the design proposals: Development 3 - FINAL PRODUCT



What you need to think about: This page should be full of detailed information - You have spent weeks thinking about it!

1. Final Idea should be hand drawn

a. Fully ANNOTATE idea: -

2. Annotating is adding a short paragraph about features of the idea that cannot be determined by simply looking at the sketch. These will include:

- a. Notes on how design meets specification
- b. Notes on ingredients
- c. Processes/method required
- d. How easy the product is to make
- e. What finishing techniques are to be used
- f. Any additional ingredients or comments

2/3  
for  
each  
point!

Fully justify  
design  
decisions  
through clear  
annotation

3. Add detail views where required

AQA Criteria - Final idea should clearly show all features, fully justified, of final design

## Exemplar Work:

### Final Product

#### Ingredients

##### Tomato sauce:-

200g Tinned tomatoes  
30g Grated Cheese

##### Meatballs:-

100g Turkey mince  
20g Egg

##### Garlic Pasta:-

100g Strong Plain flour  
15g Oil

20g Smoked Bacon  
5g Mixed Herbs

50g Cranberry sauce  
35g Breadcrumbs

20g Egg  
5g Garlic

##### Mint chocolate chip ice-cream:-

100ml Double Cream  
25g Sugar  
5ml Green Colouring

##### Chocolate brownies:-

25ml Caramel Sauce  
50g Margarine  
75ml Water  
100g Milk chocolate chips

100ml Whole Milk  
5ml Peppermint  
50g Milk chocolate chips

#### Development review:-

**Development 1:-** I will use the garlic pasta as it was clearly the most popular. **Development 2:-** I decided to use the combination of turkey and cranberry meatballs because the turkey was ideal for a low costing meal on an aircraft. **Development 3:-** I combined the cheese and the bacon flavours together, as they were both the most popular. **Development 4:-** The mint choc-chip flavoured was chosen as it was the most popular and would compliment the chocolate brownie more compared to the strawberry flavour. **Development 5:-** I will use the plain chocolate brownie with the caramel sauce for the final dessert to accompany the mint chocolate-chip ice-cream.

#### How the changes affected the product:-

- The turkey mince reduced the overall cost of the product.
- The cranberry sauce made the meatballs sweeter.
- The garlic in the spaghetti increased the Italian flavour to the meal.
- The home made pasta made the making of the product more skilful and complex.
- The mint flavoured ice cream complimented the flavour of the brownies more than the vanilla ice-cream did.
- The addition of cheese and bacon in the sauce gave a varied texture and extra flavour.

#### Final Development - Re-heating test of the spaghetti and meatballs:-

- The meatballs remained appetising as they kept the moist from the cranberry sauce.
- The spaghetti did not stick together once the meal was reheated and this also made the meal appealing. The taste of the product was good, as it retained the garlic flavour and the texture was kept moist.
- The ice-cream and brownie did not need to be reheated, so could only be included in the storage testing.

**Conclusion:-** After re-heating the main course meal, the sensory characteristics remained, proving that the

## Objectives:

- A-A\*** > Excellent development work through experimentation with a wide variety of techniques and modelling (including CAD where appropriate) in order to produce a final design solution
- C+** > Good development work achieved through working with a variety of techniques and modelling (including CAD where appropriate)



## Ecclesfield School - Department of Design and Technology (Food Technology)

### Final Product

**Aim:** To produce the details of the final product.



My final product as a tray as if it were ready to be served on an aircraft. Both the main course and dessert are presented and packaged in a ready meal cases. A knife, fork and spoon are also at the side ready for serving.

#### Ingredients

##### Tomato sauce:-

200g Tinned tomatoes  
20g Smoked Bacon  
30g Grated Cheese  
5g Mixed Herbs

##### Meatballs:-

100g Turkey mince  
20g Egg  
100g Strong Plain flour  
15g Oil

##### Garlic Pasta:-

20g Egg  
20g Egg  
5g Garlic

##### Mint chocolate chip ice-cream:-

100ml Double Cream  
25g Sugar  
5ml Green Colouring  
100ml Whole Milk  
5ml Peppermint  
50g Milk chocolate chips

##### Chocolate brownies:-

25ml Cornal Sauce  
50g Margarine  
75ml Water  
100g Self Raising Flour  
50g Egg  
25g Cocoa Powder  
100g Milk chocolate chips

#### Development review:-

**Development 1:-** I will use the garlic pasta as it was clearly the most popular. **Development 2:-** I decided to use the combination of turkey and cranberry meatballs because the turkey was ideal for a low costing meal on an aircraft. **Development 3:-** I combined the cheese and the bacon flavours together, as they were both the most popular. **Development 4:-** The mint choc-chip flavoured was chosen as it was the most popular and would compliment the chocolate brownie more compared to the strawberry flavour. **Development 5:-** I will use the plain chocolate brownie with the cornal sauce for the final dessert to accompany the mint chocolate-chip ice-cream.

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- The turkey mince reduced the overall cost of the product.
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- The addition of cheese and bacon in the sauce gave a varied texture and extra flavour.

#### Final Development - Re-heating test of the spaghetti and meatballs:-

- The meatballs remained appetizing as they kept the moist from the cranberry sauce.
- The spaghetti did not stick together once the meal was reheated and this also made the meal appealing. The taste of the product was good, as it retained the garlic flavour and the texture was kept moist.
- The ice-cream and brownie did not need to be reheated, so could only be included in the storage testing.

**Conclusion:-** After re-heating the main course meal, the sensory characteristics remained, proving that the product would be suitable for an in-flight meal. The main characteristic was the flavour, and this proved to be maintained, even after a number of heating processes. Reheating in a microwave proved to make the product deteriorate more, as heating in a convection oven was the best way to do this.

#### Final Development - Storage test:-

- The storage of the spaghetti and meatballs was in fridge temperature between 1 to 4°C.
- The storage of the mint chocolate chip ice cream and the chocolate brownie was in freezer temperature between -18 to -35°C.

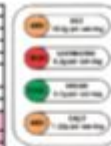
**Conclusion:-** From testing the storage life of my final product, it made me aware that after the second day the characteristics began to deteriorate.

#### Comparison against the specification:-

- The meal was designed to be served on an aircraft, and suited the requirements of the passengers by the level of originality I created throughout the development stages.
- The main course meal is suitable to be stored in a chilled cabinet to prevent the deterioration of the meal, and the dessert is suitable to be stored in a freezer cabinet. These will also be suitable for serving as an aircraft.
- A contrast between the spaghetti and the meatballs was evident. The meatballs were firm, with a slightly crispy outer coating, and the spaghetti was soft. The sauce was a smooth consistency, with additional ingredients such as bacon added to create varied textures. The ice cream texture was smooth and creamy with solid lumps of chocolate. The brownies created a soft and spongy texture.
- The aroma was distinctly Italian. There was a clear smell of garlic from the sauce and the pasta. There would be a slight aroma from the cooked meat. The ice cream was small sweet and appetising.
- The portion size is a serving single size and is balanced, as it includes all of the main nutrient groups. The dessert is high in fat, however only a small portion would be consumed.
- The meal was made from high quality products, all that were presented professionally to give the highest quality looking appearance, which is not always the case with airline food.
- The meal does not conform to all the best well recommendations as it does not contain sufficient vegetables and included a high amount of fat.

#### Nutritional Analysis:-

Nutritional Information: Spaghetti and Meatballs	
Per 100g	
Energy	1000 kJ
Protein	15.0g
Carbohydrate	30.0g
Fibre	1.0g
Sugar	1.0g
Fat	10.0g
Saturated Fat	5.0g
Trans Fat	0.0g
Salt	0.5g
Sodium	0.1g



Nutritional Information: Brownie & Ice Cream	
Per 100g	
Energy	1500 kJ
Protein	5.0g
Carbohydrate	15.0g
Fibre	0.5g
Sugar	10.0g
Fat	25.0g
Saturated Fat	15.0g
Trans Fat	0.5g
Salt	0.5g
Sodium	0.1g



From looking at the nutritional analysis, it is clear that the main course is low in sugar, high in saturated, but average in fat and salt. The dessert is high in fat, saturated and sugar, but is average in the portion of salt.

#### Modifications and Commercial production:-

- To add further textures to improve the dish I could investigate the possibility of adding a topping to the dish such as a cheese crumble.
- The product's nutritional composition is disappointing. I could carry out extensive development work to reduce the amount of fat and sugar in the product and provide a healthier alternative.
- The product does not conform to the 5 portions of fruit and vegetable recommendation so I could aim to add more vegetables to the main course and fruit within the dessert.
- If the product was to be commercial produced I would need to investigate whether the product could be made to a budget.
- I would also need to find out whether ice cream is a suitable product to be made for an airline.
- I would need to investigate whether the product could be scaled up and produced on mass. I would also need to investigate the food safety risks associated with making the product.

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# Development of the design proposals: Evaluation of Development & Final Design



What you need to think about: **Clearly annotated drawings are important to communicate your ideas**

1. Summarise what you have found out from each of your development sheets, highlighting how it informs your final design
2. Include: -
  - a) Labelled photograph
  - b) Annotated hand drawing
  - c) Refer to size, weight & shape
  - d) Details of any ingredients used
  - e) Details of any additional ingredients used
  - f) Details of any special processes used

Tick these off when you have completed them

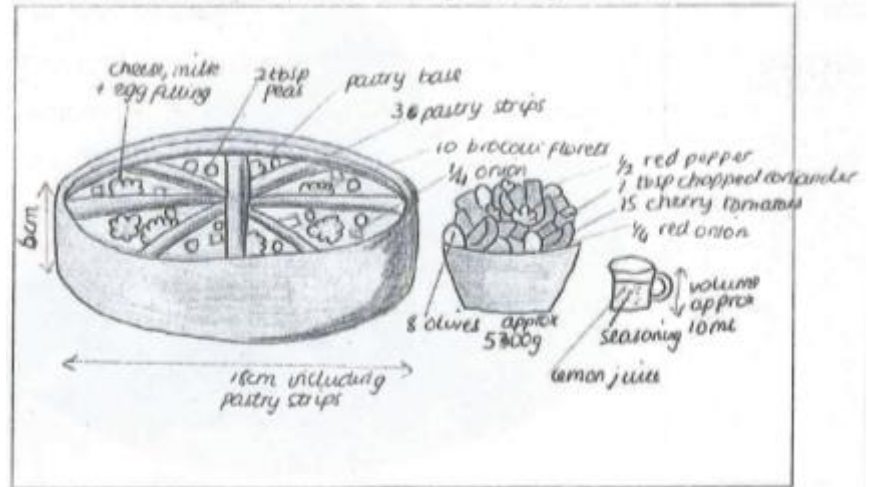
Views should be carefully drawn to show required detail. A view may be required to show in more detail.

**AQA Criteria** - a 3<sup>rd</sup> party should be able to manufacture / assemble your project from this drawing

## Exemplar Work:

### Final Product

Here is a sketch of the final product including size, weight and shape



## Objectives:

**A-A\*** > A coherent and appropriate design strategy, with clear evidence of a planned approach, adopted throughout

**C+** > An appropriate design strategy, with evidence of planning, adopted for most aspects





# Development of the design proposals: Production Plan



What you need to think about: **The many stages of the design and making process, in detail**

1. Firstly think what would scale of production be? One off / Batch / Mass Production
2. Flowchart representing your project
3. Add notes on why flowcharts are used in industry
4. Add **QA/QC considerations** and reference to processes / methods / cutters / equipment

Flowchart should follow a logical making process, start with a rough draft to review with your teacher

Make sure you reference all quality checks!

5. Include your **ingredients & equipment list on this page**

Process

Start / Stop

Decision

**AQA Criteria - You need to show understanding of both Quality Control and Quality Assurance**

## Exemplar Work:



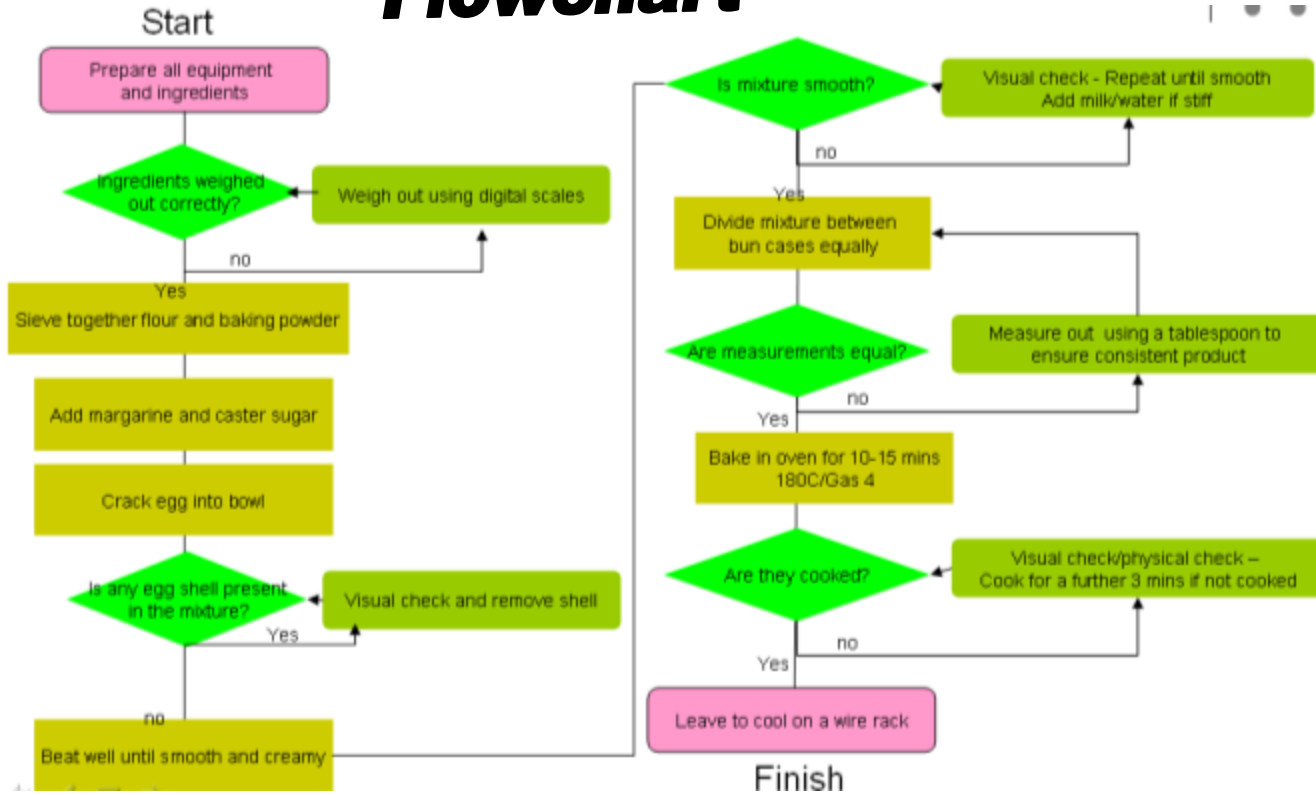
## Objectives:

**A-A\*** > A coherent and appropriate design strategy, with clear evidence of a planned approach, adopted throughout

**C+** > An appropriate design strategy, with evidence of planning, adopted for most aspects



## Flowchart



### Ingredients

200g Flour

4 Eggs

200g Sugar

200g Margarine

### Equipment

2 x 7" Cake tins

Spatula

Baking

Parchment

Mixing Bowl

Electric Mixer

Weighing Scales

Sieve

Tablespoon

Oven

Cooling Wire

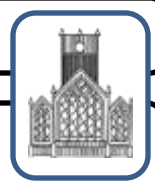
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# Development of the design proposals: **Controlled Assessment Diary**



## What you need to think about:

Using your production plan you must at each stage document (photograph & explain) each Step (machine, process, computer, machine made, Etc) of your practical journey proving and showing your skills.

This must be done to prove the authenticity of your work and show off your skills, abilities & outcomes. Accompanying the photographic evidence of your work essentially to achieve a better grade you must explain your actions. How it went, did it all go to plan, if not why and what did you do about it? What changes were you forced to take, what improvements did you do to your final idea?

**AQA Criteria -**

## Exemplar Work:

Controlled



**What I Need to finish**

**Done?**

Levels For page, tick the level of YOUR work: -

26-32 ~ A coherent and appropriate design strategy, with clear evidence of a planned approach, adopted throughout

19-25 ~ An appropriate design strategy, with evidence of planning, adopted for most aspects

12-18 ~ An appropriate design strategy, with some evidence of planning, adopted for some aspects

6-11 ~ A limited design strategy, with minimal planning, is evident

0-5 ~ Little evidence of a logical approach being adopted, with no indication of planning



# Controlled Assessment Diary



## 1. Routing

I used a flat bed router to make a groove in the wood so the square wood slot in. The bit I used was 3mm.



## 2. Marking Out

I use a marking gauge to create a line then I marked out the squares to make the joints.



## 3. Cutting Joint

I used a tenon saw to cut out some joints and a coping saw for the more fiddly joints.



## 4. Sanding Joint

I used a file with sandpaper wrapped round it to file the joints so they would fit together.



## 5. In the Vice Glued

I glued the joints together with the square in the grooves



## 6. Belt Sanding

I used the belt sander to make the sides smooth so the joints don't stick out and are flat.



## 7. Sanding by Hand

I used the sandpaper to sand down the sides so it was smooth and there were no scratches from the belt sander



## Waxing

Once I had sanded it completely I rubbed the wax in allowed it to dry then rubbed it again with a dry cloth



## Exemplar Work:



## Objectives:

- **A-A\*** > Final outcome(s) shows a high level of making/modelling/finishing skills and accuracy
- Selected and used appropriate tools, materials and/or technologies including, where appropriate, CAM correctly, skilfully and safely
- Worked independently to produce a rigorous and demanding outcome
- Quality controls are evident throughout the project and it is clear how accuracy has been achieved.
- The outcome has the potential to be commercially viable and is suitable for the target market
  
- **C+** > Final outcome(s) shows a high level of making/modelling/finishing skills and accuracy
- Selected and used appropriate tools, materials and/or technologies including, where appropriate, CAM correctly, skilfully and safely
- Worked independently to produce a rigorous and demanding outcome
- Quality controls are evident throughout the project and it is clear how accuracy has been achieved.
- The outcome has the potential to be commercially viable and is suitable for the target market

# Testing and Evaluation: Client Testing



What you need to think about: How can you prove the function of your product? Who's opinion will help?

## Testing

1. Firstly ensure testing is carried out by your end user (target market)
2. Take photo's of it in making at each stage
3. Seek opinions/comments of the TMG
4. Consider asking retailers of similar products, when they are not busy!
5. Justify each point of your decision (specifications)
6. Include a star profile for your product

## Modifications and Personal Evaluation

1. Review your final project and assess its success
2. Ask other people's opinions
3. Try to answer the following: -
  - a. Do you find the product easy to use?
  - b. Does it function the way you intended?
  - c. What do you think of it as a commercial product?
  - d. Do you like / dislike any features? Explain...
  - e. What are the advantages compared to other products?
4. What modifications would you make to the project if you repeated it?

Tick these off when you have completed them

Fully justify each point

AQA Criteria -

Conduct a consumer trial with a 3<sup>rd</sup> party

## Exemplar Work:

### Testing and Evaluation

Final product- Chick



Chopping onions



Chopping chicken and bacon



Adding meat and vegetables to pan



Cooking pasta

#### Specification

It turned out that the chicken and bacon pasta fitted the target market very well. The product was suitable for the target market which was families, because it was quite a simple ready meal that adults and children would like. The meal was healthy and had a variety of vegetables including onion, garlic and mushrooms. The ingredients are also locally produced. The product is suitable for a family and was also nutritionally balanced.

Many people are concerned about the ingredients used and where they have come from. To improve my product and to encourage more people to buy it, I used free range chicken. I used free range chicken as the chickens are kept in better conditions. However this increases the price of the product.

## Objectives:

- A-A\*** > Detailed testing and evaluation as appropriate throughout the designing and making process taking account of client/user or third party opinion. All aspects of the final outcome have been tested against the design criteria and/or the product/manufacturing specification
- C+** > Appropriate testing and evaluation evident throughout the designing and making process. Most aspects of the final outcome have been tested against the design criteria and/or the product/manufacturing specification



# Testing and Evaluation

Final product- Chicken and Bacon pasta



Chopping onions



Chopping chicken and bacon



Adding meat and vegetables to pan



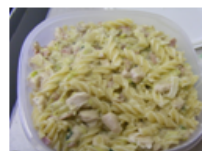
Cooking pasta



Adding meat to saucepan



Adding cream and pesto



Chicken and Bacon pasta

### Specification

I have found out that the chicken and bacon pasta fitted the specification very well. The product was suitable for the target market which was families, because it was quite a simple ready meal which most adults and children would like. The meal was healthy because it had a variety of vegetables including onion, garlic and leek. These ingredients are also locally produced. The product was the right size for a family and was also nutritionally balanced.

The pasta is a source of carbohydrates which give you energy and make you feel full. The vegetables provided vitamins, minerals and fibre, which keep your teeth, bones and digestive system healthy, and also help with growth and development. The chicken and bacon is a source of protein, which helps your body grow and repair. The olive oil contains fat which provides omega 3 and 6. Most of the people on the questionnaire said they would pay £5-£8 for a family sized ready meal and my product cost approximately £5 to make.

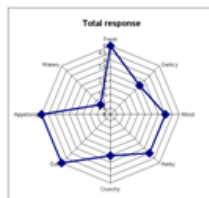
Many people are concerned about the ingredients used and where they have come from. To improve my product and to encourage more people to buy it, I used free range chicken. I used free range chicken as the chickens are kept in better conditions. However this increases the price of the product.

I think my product is a lot better than similar products on the market, because it is a lot healthier and more nutritionally balanced. However is it more expensive because it contains free range chicken.

The chicken and bacon pasta could be consumed by the majority of people including people with nut allergies. However it would be unsuitable for vegetarians as the product contains chicken and bacon.

This sensory analysis shows that the product is overall quite successful. It scored highest on moist and fresh, because it is made of fresh ingredients and the pasta was moist because of the creamy sauce. It scored quite high on herby, because the green pesto is made of basil and other herbs. It was very fresh because of the fresh ingredients and the different ingredients

gave the product a variety of different flavours and textures. The texture of the product was mostly soft because of the pasta, but the onions and leek added crunchy textures. The product got a low score on watery because it was quite thick and very creamy so therefore did not taste watery. The product was not tough or chewy so it would be easy for young children and elderly people to digest, which makes it suitable for the whole family.



### Comments

- The pasta was very tender and tasted good with the chicken and bacon.
- The creamy sauce was thick and tasty because of the pesto.
- It was full of different flavours and textures.

### Justifications and Modifications

#### Ingredients

I think that all of the ingredients that I used worked well, as they created different tastes and textures.

#### Method of Making

The whole method of making the product was very good as I found out that it took less time to make than I expected.

#### Cooking

It was best to cook the meat in the saucepan because it was easier to observe and stir to ensure even cooking, and it also made it easy to add the vegetables and sauce.

#### Quality

I think that the product was of high quality as it was nutritionally balanced and contained a variety of fresh ingredients. It was also suitable for families because it is easy to cook and prepare, however the overall cost is a bit too high, therefore some of the ingredients would need to be replaced by cheaper ones. However, cheaper ingredients could possibly lower the quality of the product.

#### Appearance

When I served the pasta on a plate it looked quite colourful because of the green colour of the leeks and pesto, and the pink colour of the bacon. These colours contrasted well with the creamy sauce and pasta.

#### Shape and Size

The pasta shells were a curly shape because it was fusilli pasta that I used, and the chicken and bacon were diced into small cubes.

#### Flavour and Texture

The strongest flavours you could taste were pesto, chicken and bacon. The textures were mostly soft and crunchy.

#### Finish

I could improve the product by putting a sprig of basil on top to add extra colour and decoration.

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# Testing and Evaluation: Evaluation V's Specification



What you need to think about: Pick key features from specification to review and think of industrial issues

1. Evaluate the finished project back to your original Specification with respect to: -

- Target Market Group
- Function of ingredients
- Size
- Weight
- Nutrients
- Appearance
- Ingredients
- Safety
- Cost
- Green Issues
- Manufacture
- Packaging

Tick these off when you have completed them

Fully justify each point

2. Modifications for Production - Discuss this with your teacher

- Would the same materials be used in industry?
- Would process/methods be the same?
- Would finishes be the same?
- How would production costs be reduced?
- Where would it be made?
- How would product be manufactured?

**AQA Criteria** -State what modifications would be required to make your product commercially!

## Exemplar Work:

### Comparison to the specification

Italian Product will serve 4 people	The product follows the Italian theme. Throughout the development of the product I have used Italian ingredients such as tomatoes, peppers and olive oil. The accompaniment also includes olives which are a traditional Italian ingredient, often found on pizzas. The quiche can be made individually or a family version to be sliced into 4.
Served in a rigid tray with a cardboard sleeve	The quiche would need to be sold in a plastic mould container that will transport the product and prevent damage and therefore protect the pastry. The cardboard sleeve would protect the product.
Look attractive and appetising	The quiche looks very attractive with a golden brown pastry case and then pastry strips which will be glazed to contrast against the filling. The use of a variety of different coloured vegetables tomatoes, peas and broccoli will also provide a visually striking appearance. The salad accompaniment also provides extra colour.
Include a blend of Italian ingredients	The incorporation of a number of Italian ingredients as suggested above will allow the product to be sold under the 'Italian' heading. If I could have used basil instead of coriander added an Italian herb.
A smooth sauce and include different textured vegetables	There are different textured vegetables in both the salad and the quiche. The crumbly pastry case contrasts with the smooth and moist filling and the al dente vegetables within the salad.

### Objectives:

**A-A\*** > Evaluate and justify the need for modifications to the product and consideration given as to how the outcome might need to be modified for commercial production

**C+** > Evaluate and justify the need for improvements or modifications to the product



## Ecclesfield School - Department of Design and Technology (Food Technology)

### Comparison to the specification

Italian Product will serve 4 people	The product follows the Italian theme. Throughout the development of the product I have used Italian ingredients such as tomatoes, peppers and olive oil. The accompaniment also includes olives which are a traditional Italian ingredient, often found on pizzas. The quiche can be made individually or a family version to be sliced into 4.
Served in a rigid tray with a cardboard sleeve	The quiche would need to be sold in a plastic mould container that will transport the product and prevent damage and therefore protect the pastry. The cardboard sleeve would protect the product.
Look attractive and appetising	The quiche looks very attractive with a golden brown pastry case and then pastry strips which will be glazed to contract against the filling. The use of a variety of different coloured vegetables tomatoes, peas and broccoli will also provide a visually striking appearance. The salad accompaniment also provides extra colour.
Include a blend of Italian ingredients	The incorporation of a number of Italian ingredients as suggested above will allow the product to be sold under the 'Italian' heading. If I could have used basil instead of coriander added an Italian herb.
A smooth sauce and include different textured vegetables	There are different textured vegetables in both the salad and the quiche. The crumbly pastry case contrasts with the smooth and moist filling and the al dente vegetables within the salad.
Be a high fibre dish	I have carried out intensive development work to increase the fibre content. This has been achieved by using wholemeal flour in the pastry and incorporating lots of vegetables. The fibre content is 24g.
Cost between £3.00 to £6.00 and be suitable for a supermarket	If the ingredients were purchased in bulk the product could be sold for £3.00 and still make a product.
Suitable to be stored below 5°C	The quiche uses high risk ingredients e.g. Egg. And therefore be stored below 5°C to prevent the rapid growth of bacteria.
To be served in round plastic mould	The quiche is made using a circle mould.
To be suitable for both children and adults and sold as part of a family range.	The tasting panel made up of both children and adults scored the product high marks and therefore this criteria has been met. I have fulfilled the requirements of the target market.

### Commercial Production

If this product was to be commercially produced it could be made using batch production and this would allow different flavoured products to be made using the same equipment. I have used fresh and local ingredients and would expect the manufacture to do the same to prevent. This would address the environmental concerns such as air miles and fuel costs. The product could be scaled up and strict quality control procedures would need to be applied in a factory.

### Function of Ingredients

Ingredients	Function
Plain flour	Adds bulk, Raising agent, Adds structure
Wholemeal flour	Adds bulk, Adds colour, Adds structure, Adds texture
Margarine	Adds colour, Adds flavour, emulsifier
Water	Binding agent, Moistens
Onion	Adds colour, Adds flavour, Adds nutrients
Peas	Adds colour, Adds flavour, Adds nutrients
Broccoli	Adds colour, Adds flavour, Adds nutrients, Adds texture, Adds structure
Cheddar cheese	Adds colour, Adds flavour, Adds nutrients
Milk	Adds bulk, Adds texture, Moistens, Adds nutrients
Cherry tomatoes	Adds colour, Adds flavour, Adds nutrients
Red pepper	Adds colour, Adds flavour, Adds nutrients
Red onion	Adds colour, Adds flavour, Adds nutrients
Coriander	Adds colour, Adds flavour, Adds nutrients, Adds texture
Green olives	Adds colour, Adds flavour, Adds nutrients
Lemon juice	Preserves, adds flavour, emulsifier
Olive oil	Adds flavour, preserves
Seasoning	Adds colour, Adds flavour, Adds nutrients
Eggs	Holds air, Raising agent, Sets food, adds colour

*Manufacturers must know the function of ingredients so that they can adapt to their recipe.*



Candidate Name:

Candidate No.

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