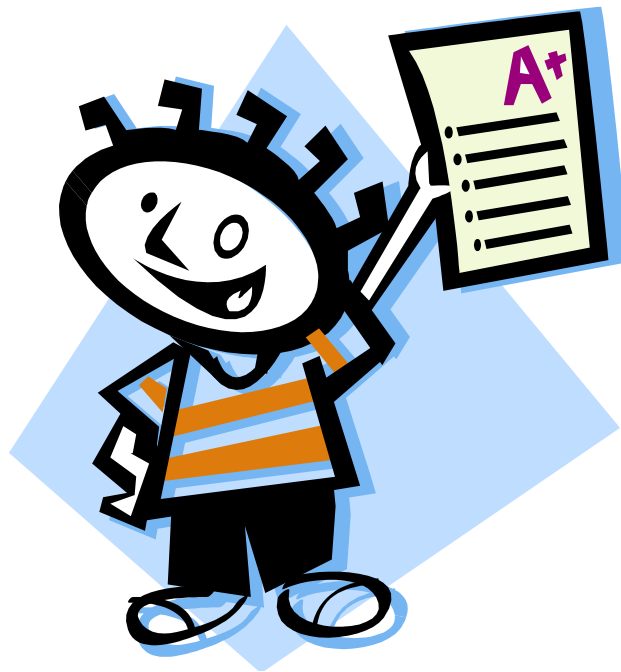


GCSE Food Technology Coursework Guide



This coursework guide offers valuable information and examples to assist with planning and completing your coursework.
PLEASE KEEP IT SAFE.

Name:

Form:

CONTEXT

There has been much concern related to the quality of food products/meals served to students in school canteens. The "healthy school dinner" campaign has brought about many positive changes. The school canteen is to launch a new and exciting range of food products to appeal to 11–16 year olds.

Design Task

Design and make a nutritionally balanced product with excellent sensory properties which appeals to teenagers.

To ensure success you must:

- Equip yourself with an A3 folder.
- Prepare a front cover for the project to include:
Name
St Aidan's C. of E. School 48237
Candidate Number, (leave space to fill in later)
Context and Design Brief
- Decide on your layout: Choose a font style and size and keep it the same all the way through.
- Choose to layout pages onto A3 or use an A3 template and layout to A4 and print and arrange the pages accordingly. (Please be aware that printing to A3 can be an issue, particularly approaching deadline dates!) Whichever method you choose it must be well laid out and neat.
- **KEEP TO DEADLINES**
- Keep to page allocation. You will be rewarded for a "focussed and concise" folder. 20 sides of A3 is the absolute maximum.
- Work independently using your own ideas and initiative. Help will be available throughout, don't be afraid to ask.



1. Investigating the design opportunity:

This is the first section of your coursework and should clearly show:

- Your understanding of the task.
- Concise, relevant and focussed research.
- A summary of the research.
- Clear understanding of how the research will inform your choice of possible design ideas.

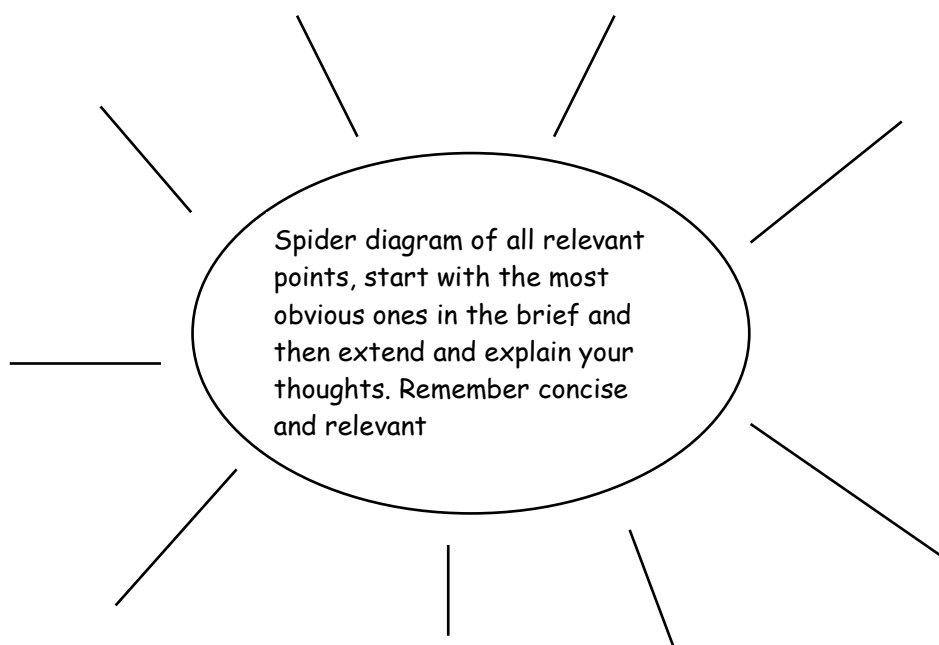
a) Analysis of the Design Task, focussing on key words and the research required.

This is your starting point. In this section you need to show that you understand the Design Brief. How can you tackle this?

- Produce a Task Analysis (Spider diagram) and a Detailed Analysis—add written detail on all main points.
- Pick out the key words and explain in detail what they mean within the context of the Design Brief

This task should be no more than 1-1½ sides of A3.

Example of a Task Analysis



b) Concise, relevant and focussed research. (A maximum of 2 sides of A3) Focus on existing products and the needs of target market/consumer. 3 pieces of research are required.

You must start each piece of research with an AIM. What are you doing and what do you hope to discover.

What sort of research would be appropriate :

- **Questionnaire.**
- **Interview with the School Chef**
- **Interview with the Dietician**
- **Visit the school kitchen**
- **Comparative shop/Shop Research**
- **Nutritional Requirement of the target market. (This is essential and must be included by all)**
- **Government guidelines for school meals.**

Questionnaire

1. Decide what you want to find out from a questionnaire.
2. Write 10 questions. Make sure each question is relevant to your Design Brief. Think very carefully about how you word each question. Always use closed questions or questions with a limited choice answer. You cannot process answers to open questions.
3. Ask 10 people to answer the questionnaire. This ratio makes working out percentages easier.
4. Analyse the results and explain what you have found out.
5. Produce graphs/charts for some of the results.

Use the table on the next page to help with your questionnaire.

Remember to start with your aim:

E.g. To find out what kind of products and ingredients are popular with school children between 11-16 years.

Interviews

Start with an aim.

Points to assist:

- Write a list of questions, possibly 8—10.
- With an interview the questions can be open and in-depth.
- Think about the sort of experience the Dietician and/or Chef might have and design your questions accordingly.
- Keep it relevant to the Design Brief.

Visit to the school kitchen

Start with the aim for this piece of research: What are you doing and why are you doing it.

It is a valuable exercise to look at how food is prepared on a commercial basis and within a limited time scale. Food safety and hygiene practice can be researched as part of this exercise.

Points to consider before you visit:

- Be aware of the type of food that is produced. Refer to the school website.
- Be ready with relevant questions about the production of school meals.
- Think about the type of information that would be useful for your Design Brief.
- Keep it concise and relevant.

Comparative Shop

Your aim could be: To decide on a product range and carry out a comparative shop to find out detailed information about products available.

Points to consider:

- Visit a supermarket or get the information on-line.
- Research at least 10 products, make sure they are different and all relevant to the Design Brief.
- Write a detailed analysis of your findings ensuring you answer your aim.
- Examples of the layout on the next page.

Name of Product	Price	Size/ Weight	Nutritional Value	Picture	Main Ingredients	Comment

Nutritional Requirements of the target market.

The Design Brief is to design and make a nutritionally balanced product, it is therefore essential to be clear about what the nutritional requirements are for young people between the ages of 11-16 years.

Points to consider:

- What information will you include? It would be of value to include energy requirements in calories (kcal not kj), protein, carbohydrates, fat, fibre, salt, iron and possibly calcium requirements.
- How do you get this information?, the following websites are excellent:
www.waitrose.com > Food & Drink > Food > Health & nutrition > Healthy eating for children > 11 to 18 year old
Food Tables: Bender & Bender
- This information needs to include figures this will be necessary for the specification.

Government guidelines for School Meals

All school meals are now regulated by government guidelines and these have come about, in part, by the work done by Jamie Oliver. You may want to investigate the work Jamie Oliver has done and the impact it has had on school lunches. You may also choose to investigate the guidelines.

Points to consider:

- How would I find information of any of these topics? There are a number of websites, publications and books in school. Useful websites:
www.eatwell.gov.uk
www.jamieoliver.com
www.staidans.co.uk
www.schoolfoodtrust.org.uk

Final note on research:

You only need 2 sides of A3. It must be focussed, relevant and concise. Emphasis must be on existing products and the target market.

c) Analysis of research and findings.

The final part of the "Investigating the design opportunity " is the analysis of research. This can be done in a table format and must be no more than 1 side of A3 or equivalent. You may choose to word process this section or you may construct a table and then write the contents.

Template in common > Technology > GCSE Food Technology > GCSE Coursework.

Type of research	Findings	Decisions based on findings	Initial Design Specification
Questionnaire	Summary of findings.	How will this help with your designing. Pick out key points.	Compile a list of things your product will be, base this on your research: <ul style="list-style-type: none"> • Sweet or savoury • Hot or cold • Main meal or snack • 1/3rd of daily RDA.

d) Design Specification

This is a bullet point list that will show what you have found out from research. These points will guide you when you begin putting together your design ideas and must reflect the design brief.

Points to consider:

- The points must reflect your research.
- The points must be measurable.
- Try not to limited your options at this point—don't add in points that will stop you being creative in your design ideas.
- The specification should include:

Target market, Product type, Portion Size

Price range, Nutritional considerations

Any special claims e.g. nut free

Sweet or savoury, Hot or cold

Type of cuisine, Ingredients details

Method of production

Development of Design Proposal

It is now time to be creative and put together a range of Design Ideas. Think very carefully about the dishes you will choose, they must fit both the Design Criteria and the Design Specification. Please be aware that this is your opportunity to show your practical abilities, **you must show a range of skills, imagination and innovation.**

The title for this section is **Development of Design Proposal** and you will put together a colourful mood board of appropriate dishes on a side of A3. You should select 10 ideas (you will make 4-6 of these) and start the page with a clear aim. The method you choose to communicate the ideas is your own choice you may collect images from magazines or the internet, you may sketch or draw different images, you can choose. It is vitally important, however, that you annotate your ideas. You must include the following information on each image:

- clear description of the dish
 - specific ingredients
 - finishing techniques
- how it fits the Design criteria and the Design Specification
 - how it can be developed
- Environmental considerations of ingredients: organic, sustainability, Fair Trade, Farm Assured, Genetically Modified, Food miles.

Additionally, you may want to add information on environmental issues such as the seasonality of the ingredients, the use of organic or Fair Trade ingredients.

Tuna flakes in a cream sauce. This gives the dish an excellent sensory and nutritional quality. Tuna is a good source of protein and low in fat. Additional flavourings could be added to the sauce, the sauce could be made with skimmed milk to reduce the fat content. Salmon or smoked haddock could be used as an alternative to tuna.

Tuna Tagliatelli: Tuna flakes in a creamy sauce served on a bed of Tagliatelli garnished with fresh basil.

Herb garnish to add colour. Mushrooms or tomatoes could be used to enhance the colour and texture.



Egg flavoured tagliatelli pasta. This could be freshly made or a standard component. Shape could be changed and could be flavoured with herbs, spices or coloured with extract of spinach.

This dish fits the Design Specification as it has a pasta base and could be served as a lunchtime meal.

Evaluation of Design Proposals:

When you have completed your mood board of annotated design proposals it is a good idea to compile an evaluation to help you to decide which ideas to make. Write a short paragraph for each chosen idea to discuss how well it would fit the criteria and the specification. Start each paragraph with a title and then write about each of your ideas, keep it short. Make sure you have chosen a range of dishes that clearly show skill, imagination and innovation.

The next page provides a template for you to write up your design ideas. This can be accessed from [Common > Technology > GCSE Food Technology > A3 Design Ideas](#).

Sensory Testing

It is important to use different methods of sensory testing. Your Design Ideas and Developments should be evaluated using a mixture of Ranking, Rating and Difference tests.

Ranking tests:

A ranking test is used to sort a choice of foods into order. You can rank foods according to which ones you like best or choose one characteristic such as saltiness, sweetness or spiciness and put the foods in order. This is very useful if you make three dishes and want to find which one people like the best. Use random coding and ask your tasters to rank the product from most liked to least liked and produce a chart to demonstrate your findings.

Rating test:

A rating test is used to find out **how much** someone likes or dislikes something. A ranking test is used to find which product tasters like best, but a rating test can give you more detailed information about how much they like or dislike something. The scales are 0-5 with 5 being the most liked and 0 being the least liked. Each characteristic of the product can be measured: taste, texture, smell and appearance for instance, any appropriate characteristic can be selected.

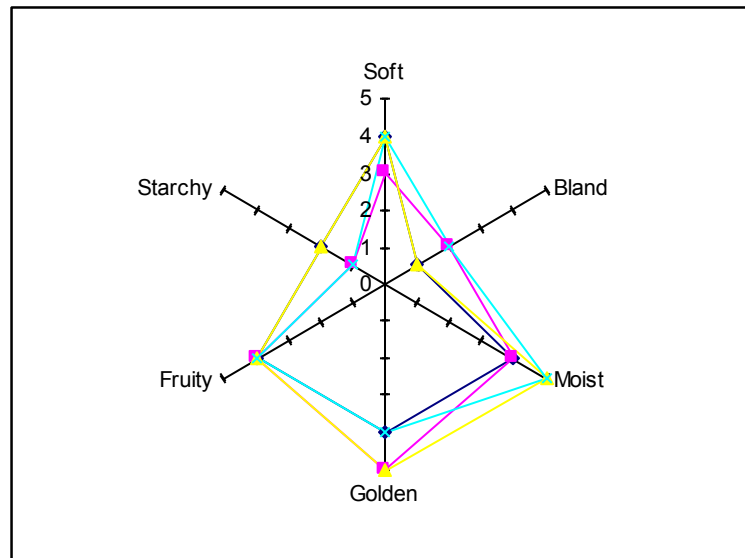
Difference tests:

These tests are used to find out if there is a clear difference between products. They might be used to test a low fat product against the same product with a higher fat content. Often samples will include two identical products and one different product or three identical ones and two Different. You might use this method if you are developing your product by changing one ingredient in each development to find out if people can notice any differences.

Sensory testing

How do I display my results?

Product profile: Use excel and produce a radar graph to display results. This method is suitable for the Rating test.



Sensory chart/table: This method is suitable for the Ranking, Rating or Difference tests.

	XXY	YXY	YYX
Taster 1	1st	2nd	3rd
Taster 2	2nd	1st	3rd
Taster 3	2nd	1st	3rd
Taster 4	1st	3rd	2nd

Written evaluation:

Write your conclusions in paragraphs. Keep it factual and make sure it reflects findings.

Design Idea 1

Aim:

Description: Name of the dish and a description if necessary.



Annotate the pictures with information on function of ingredients, methods used, skills shown, finishing techniques.

Ingredients (include the functions) and Costing:

Nutritional Analysis:

Feedback from the tasting panel:

Sensory Analysis (Product Profile etc)

Design Idea 2

Aim to get 3 evaluations on each A3 page.

Design Idea 3

Development Work

Following on from your Design Ideas it is now time to make a decision as to which product you will develop. It is vital that you think very carefully about this stage. You will be expected to carry out between 4 - 6 developments. Please be very clear about the difference between developments and modifications:

Development work involves investigating and experimenting with ingredients and recipes/methods. It has an effect on the structure (changing size, shape), sensory qualities, nutritional profile and general acceptance of the food.

Modification work is changing ingredients. Substituting one ingredient for the next.

(Development work carries the highest marks.)

Insert a chart to justify your development choice. See below for an example of the type of chart that could be used. Clearly state why you have chosen the product and how you think it will satisfy the Design Criteria and specification.

	Chocolate Pudding	Lasagne	Tuna Tagliatelli	Fish Pie	Chicken Pancakes
Design Specification points:					
Suitable to be served as part of a meal	✓	✓	✓	✓	✓
Sweet or savoury	✓	✓	✓	✓	✓
Excellent sensory qualities	✓	✓	✓	✓	✓
Hot or cold	✓	✓	✓	✓	✓
Appeals to target market	✓	✓	✓	✓	✓
Could be handheld	X	X	X	X	✓
Could be served as a break time snack	X	X	X	X	✓
Interesting and different	✓	X	✓	X	✓

Following the chart add in a paragraph

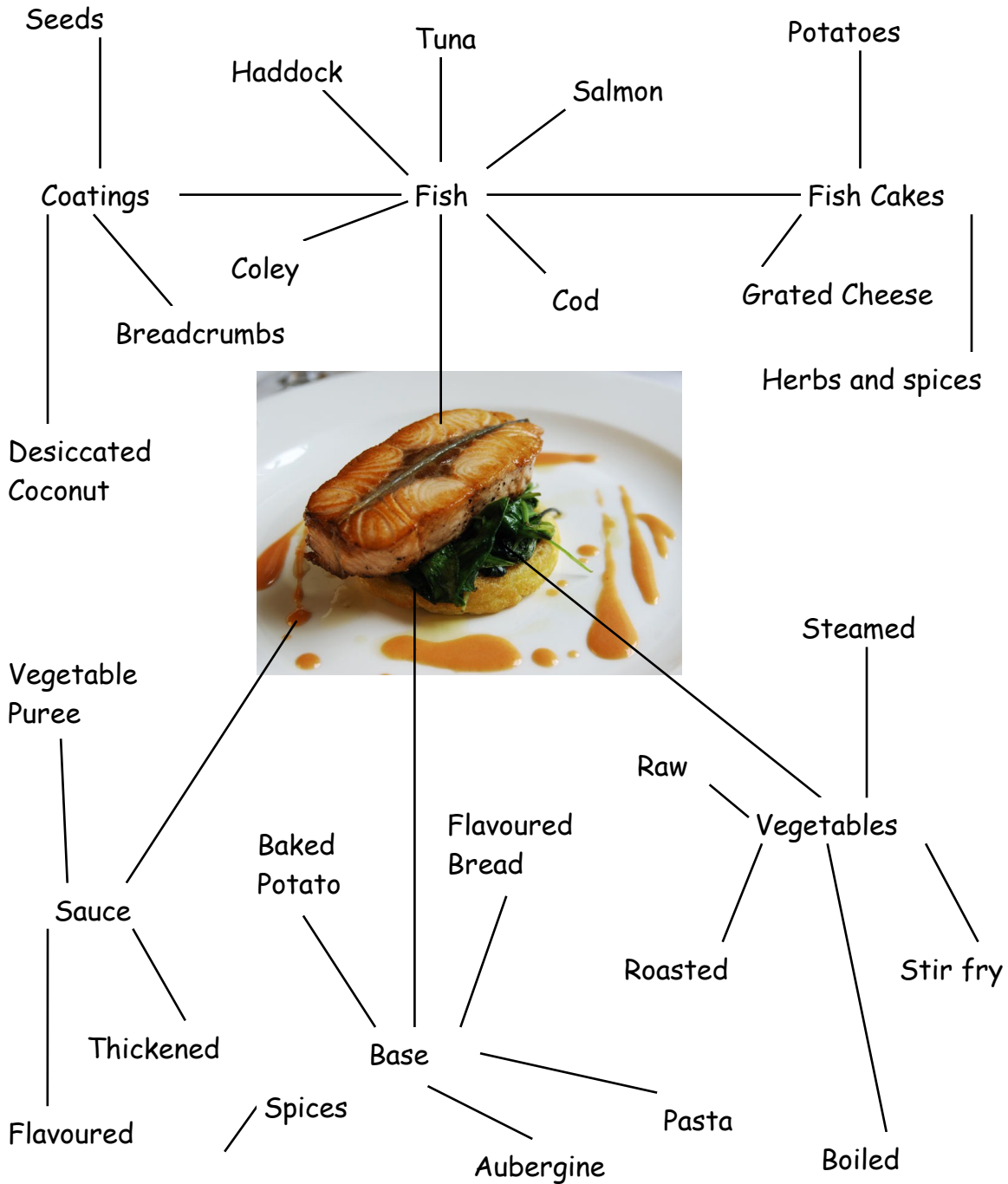
- Picking out the points from both Design Criteria and the Design Specification and say how this products meets them more closely than the other ideas.
- say what did not match so well and how you could change that.
- Focus on the sensory qualities—how does it look, how acceptable was the taste and the texture. Remember the focus is on “excellent sensory properties” and “new and exciting”.

See the template on Common> Technology> GCSE Food Technology> GCSE Coursework> Product Spec for assistance.

Communicating development ideas.

Having made your choice for your development work you must now put together a mind map of some ideas. Think about all the possible developments that could be carried out on your chosen product.

This is an example:



If you are stuck for ideas flick forward to the page titled "Planning for Development work" for assistance.

Product Specification

This is a detailed list of the things that your product will be. Think carefully about the Design Criteria, the Design Specification and the design process you have worked through and use SATSUMAS as your guide. The order in which it appears can vary but make sure you cover each point.

S—What will the size (dimensions) be?

A—Describe the sensory characteristics: Appearance and Aroma.

T—Describe the sensory characteristics: Taste and Texture.

S—What shape will the product be?

U—What will be the use by/shelf life of the product? (e.g. chilled 3 days) How much will the unit cost be?

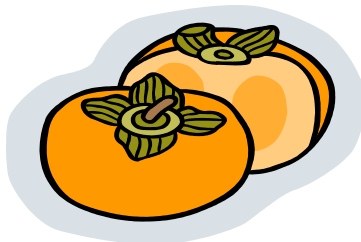
M—What materials are needed and what will the mass weight be?

A—What is the age/target group the product will be aimed at? E.g. Those on a vegetarian diet, low-fat, healthy-diet?

S—How will it be stored? E.g. chilled, frozen.

Also include: - What your product is called?

- How many will it serve?
- What is its nutritional profile?



As you begin your development section do remember that this is the section that carries the most marks.

Product Analysis

Before you begin to develop your product it is essential to carry out a Product Analysis on a similar product to give you a clear insight and inform your development work.

Here are some guidelines to assist with this task. You will need to think about how you will record and display your information.

Name of the product and manufacturer?

Price?

Total and per 100g

What does the food look like?

Shape, colour, before and after heating.

What is its size?

Show weight, height, length, and a labelled drawing.

What ingredients does it contain?

Look at the ingredients list, notice the proportions of the ingredients.

How long will it keep?

Storage instructions?

Datemark, storage instructions.

What is the nutritional value?

Look at the chart on the label.

Reheating instructions?

Serving instructions?

What are they? Do they work?

How much does each part of the product weigh?

Take each part and weight it separately.

Taste, texture?

Use a variety of appropriate sensory descriptors.

Who would the product appeal to?

Write a detailed conclusion to your findings.

Use the digital camera throughout to record photographic evidence.

Planning for development work.

You do not need to plan more than one or two practicals ahead. The result of one practical should lead you into the next.

There are different ways of approaching development work. A development practical may explore more than one development e.g. if you are exploring different flavouring for your chosen product choose several combinations for one development:

Aim: to explore the addition of multicultural ingredients to the basic beef burger recipe.

Make up a 300g basic mixture, divide into 4 bowls.

- Bowl 1 add sundried tomato paste + 1 tsp oregano
- Bowl 2 add garlic, ginger, soy sauce, onion.
- Bowl 3 add garlic, fresh chilli, red kidney beans.
- Bowl 4 add tikka masala paste.

Shape burgers and cook, carry out sensory analysis.

Development Ideas

Pizza ideas:

Base: Add: herbs, spices, vegetables, fruit, seeds, colour, texture, flavour,

Change: white flour to wholemeal flour, tepid water to tomato juice, stock etc.

Topping: Sundried, fresh, roasted, green etc. Consider alternatives to tomato, pesto, bbq sauce, Indian sauce, Mexican salsa, blended roasted vegetables, caramelised onions, cheese sauce etc

...and for something extra think about marinades, additional flavouring, texture, colour, shape, size. Why not layer, roll, create a triangle, sandwich etc

Burger ideas:

Meat, fish, pulses, vegetables, cheese, quorn, tofu etc. Use marinades or herbs, spices or oils. Consider interesting extras for flavour and texture. Layering of different bits all pressed together to form burgers e.g. roasted vegetables, chicken breast, basil and smoked ham or bacon etc.

Bread: Add herbs, spices, vegetables, seeds, colour, flavour. Adaptations: wholemeal, marble, change the tepid water to a flavoured liquid.

Size and shape: novelty shape, decorated finish, add glaze, sprinkles, use a mould.

Final Product

A demanding final product is required. Think very carefully about how you achieve this. How you will achieve this by working independently??
Will your final product have excellent sensory qualities and fit the original design criteria along with all your specifications? Take time out to consider all these factors.

Production plan

A detail plan including the processes/methods, food safety and hygiene, quality control and monitoring is necessary. An A3 template is available in the Year 11 folder in common, use it to assist with this task. It is not necessary to include timings, however, you will need to be very aware of how you will complete this task in the allocated time.

Photographs are essential, maximum of 4, as evidence of your work. It is vital that you make good use of the digital camera.

You are nearing the finish line!!

You will now need to write up a final evaluation for your finished product. To assist you with this two templates are available on common:

Final solution 1 & Final solution 2

Use these guides to help and make sure you include all the relevant information.

Some final "food for thought" points!

Your coursework should flow a bit like a story—does yours????

6 marks are available for good grammar, spelling, punctuation, use of technical language and a "concise design folder" - Will you get all 6????

Excellent use of the space on each page and correct layout instantly gives a good impression-work hard to achieve this.

As you reach this stage 60% of your GCSE is complete—WELL DONE :)