

Assessment

In



Food Technology

Introduction

The subject is called "Food Technology" and is part of the school's DfT curriculum. But I want you to think of it as "Food & Cooking".

Food is what we shove into our bodies several times a day.

Cooking is what we do to most of the raw ingredients to not only make them palatable but to make the whole eating experience an enjoyable and satisfying one.

The skills you are going to be shown, learn, practise and refine will remain with you as an extremely valuable life skill. The knowledge & understanding you will gain will help you make informed and reasoned judgements about about your food choices and kitchen craft so you eat healthily and know how to prepare food effectively and safely.

So - what do you need to do to get good marks in Food & Cooking? Hopefully this booklet will give you some idea of the sort of work you need to produce to achieve higher grades and levels.

Firstly - watch demonstrations carefully. Not just the class ones but the many media clips on 'foodie' websites. Practise techniques.

Cook for the love of it. Don't be afraid to make mistakes - adults call this experience! - but make sure you learn from them.

Taste! Remember you want the diner to savour the dish you are preparing - its appearance, textures and flavours matter.

Research - find out about food ingredients, nutritional values, how & why the body uses & needs each nutrient. Find out about food production, growing & farming, quality assurance. Quality produce for quality dishes. Use cook books to compare recipes.

Use the 6 "P"s = Proper Prior Planning Prevents Poor Performances - to fix all the necessary steps, stages, timings and methods before you even go into the kitchen to start cooking.

And remember - because this is school you will be asked to write down and explain your ideas, recipes, reasons and evaluations. And how well and thoroughly you do this will determine what level assessments you receive. The pages that follow give several pointers and tips. Use the Sharepoint Food Tech Resources pages to see what your predecessors have done to hit the higher levels. Good Luck!

Understanding Food -

Ingredients - Processes - Nutrition

You need to show your understanding and knowledge of these three overlapping areas as you develop your recipes, plan your cooking session and carry out your evaluations. Justifying your decisions by quoting your research topics can seriously improve your chances of higher levels!

For instance, salt Just to say that too much salt is bad for you shows you know this is important but won't earn anything beyond level 4 - but if you write about the health implications of having too much salt in your diet and quote the GDAs for salt this will show level 5 to level 6 understanding of nutritional values. This can be raised to level 7 by talking about foods high in salt, how the body uses and reacts to salt and also by working out the salt content in foods and recipes eg using label information and/or Food for PC. Higher understanding can also be shown by explaining the role of salt in flavouring and preserving foods.

Healthy Eating Guidelines (level 6/7 - extract from project work)

The original recipe contains a lot of salt. For an average adult the Guideline Daily Amount (GDA) is 6g of salt per day. Too much salt in the diet has been linked to problems such as high blood pressure and heart disease.

The recipe also contains a lot of saturated fat. The GDA for an adult is 20g a day. Eating too much saturated fat will cause an increase in cholesterol in the blood. Cholesterol is a chemical made in the liver. Too much cholesterol has been linked to a higher risk of:

- heart attack,
- heart disease,
- strokes and an increase of blood pressure because of fatty deposits narrowing the space for blood to flow through the arteries.

The recipe also contains very little fibre. The GDA for an adult is 24g a day. Fibre is important in the body because it:

- absorbs poisonous waste from digesting foods,
- prevents constipation,
- reduces cholesterol in the blood,
- reduces the risk of heart attacks and bowel cancer, and fibre improves your digestive system.

Understanding Food -

Ingredients - Processes - Nutrition (continued)

With regard to food processes, include detail on the science behind the cooking processes and the technology involved in food production processes.

Eg - in bread making, describe what yeast is; how it performs its function as a raising agent; the importance of proving, resting and knocking back the dough; what is gluten; its importance in bread making and the need to 'develop' it to help the risen dough keep its shape; and so on.

In many recipes eggs are used. As well as their important nutritional value, describe their versatile functional properties - binding, coating, emulsifying, foaming and thickening.

The choice of the cooking process might be important - describe the difference between, say, sauté and boiling, frying and grilling, or why it is important to start cooking a duck breast in a cold pan.

Other areas of knowledge that might earn you credit include:

Cultural and social aspects of food;

Food production and farming;

World cuisines, regional ingredients & specialities;

Environmental & sustainability issues.

Make sure you show clear understanding of how the key nutrients are used by our bodies. How do they relate to the main food groups of the "Eatwell Plate" and other recommended advice for healthy eating.

The more information you include, the better but to ensure you achieve the higher levels in understanding you must demonstrate how the information has helped you make your choices of ingredients and methods in your recipe and planning.

Final Tip! You should get familiar with a nutritional analysis tool such as the Excel worksheet based "Food for a PC" - not only great for fixing the precise nutritional content of a dish/meal and providing GDA figures for each population segment, but it also does costings, sensory analyses and labels.

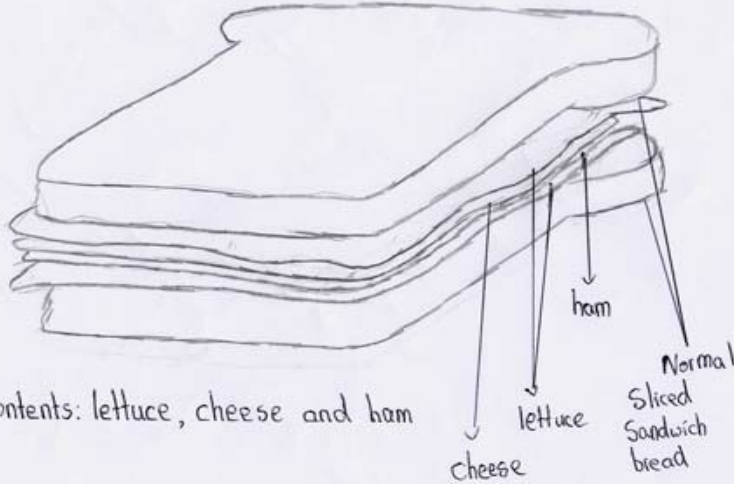
Recipe Development

Don't forget the task brief! Nor to use and link research and other relevant information to explain your choices as you define and develop your recipe. Maybe include something about the cooking processes you're going to be using (eg you may not have made pastry before but including details of the various pastry types, their uses and the differing techniques needed to make them will earn you extra credit).

Defining targets (a "specification") for your recipe/dish is a good call - make sure that the targets can be measured and that you can produce the evidence. Eg one target might be to create the recipe for ingredients cost of less than £3; the shopping bill and a bit of proportional calculation will provide the supporting evidence. Think about who you are cooking for - are they vegetarian, lactose intolerant, etc. This will provide another target point.

Having a good set of target points makes the evaluation process much easier!

Sandwich ideas



Contents: lettuce, cheese and ham

bread
lettuce
cheese
ham
Normal Sliced Sandwich bread

I like this design because of its simplicity. I believe this sandwich design is simple to make & it will serve the purpose as a snack. Nutrition wise I believe this sandwich design has healthy contents. The lettuce has a high source of vitamins & minerals. The cheese is a dairy product so it is a source of fat & the ham provides proteins So has a ~~balanced~~ balanced contents.

However the design lacks creativity and I believe it would taste dry if served like its shown on the diagram. This may be as of my likings.

Level 5 - (only part of ideas shown) - clearly drawn, well labelled; main reason for selection of ingredients based on basic nutritional values; needs to consider nutritional balance and define specific nutrients by name; also review choices against other criteria such as textures, aroma.

Recipe Development - continued

Targets should be several, specific and measurable. Consider ...
Costs, flavours, nutritional targets, serving portions, hoped-for feedback from tasters - appearance, textures and flavours, time-to-make, skill level required to make.

All these can provide key assessment/review points for evaluation section that can be supported by evidence, be it comparing nutritional figures from analysis or comments made by tasters.

To help you write your evaluations, think carefully how you will measure the success or otherwise of each target point. There are a few suggestions for how you might do this ...

Nutritional targets - such as "reduce salt content by 50%" and "keep saturated fat below 2g per person" you can show have been met by putting the dish's recipe (ingredients and quantities) into 'Food for PC' or other similar nutritional analysis program, which will show precise values for each nutritional component. A short written comment on the analysis sheet comparing the result to your target is all that is needed to show success or not.

Costs - a basic costing for the recipe will show if cost targets are met. 'Food for PC' will help with this.

Tastes, Textures & Flavours - as well as some descriptive comments of tastes, textures and flavours from tasting panel, ask them specific questions eg what flavours they can detect and compare them with any specific target flavours you wanted your dish to carry. Also seriously consider carrying out a sensory analysis in which you ask your tasters to score key features of your dish such as how salty, how soft, how spicy, how sweet, how crisp/soggy, etc they found your dish. Score 1 to 5 ('not very' to 'highly') for each aspect or sensory descriptor you have chosen to ask them score; results can be left tabulated or put onto a star-diagram - again 'Food for PC' can generate both.

Don't forget to explain how each descriptor is scored - eg "Salty" would score 5 for too salty, 1 for no salt (bland) and 3 for 'just right' whereas "Appetising (Appearance)" would score 5 for very appetising and 1 for not appetising at all.

Planning to Cook

Remember - these need to instruct rather than advise. The minimum requirement is the "recipe" which must include a list of ingredients with quantities and a method on how to combine the ingredients to create the dish.

Basic "Cook Book" recipe equates roughly to a Level 5/6. So how to improve on this??

You can start by writing a refined version with better description of processes (eg "finely dice the onions" rather than "chop onions"); including an equipment list and perhaps some advice on safety and hygiene might improve standard to level 6/7.

Clear step by step indication of process timings and expected outcomes, together with HACCP and quality control statements at relevant steps in the task should lift your planning into level 7/8.

Additions of sketches and photographs, especially to depict key processes will potentially improve the level of the planning work further.



Level 5 - Neat series of sketches, clearly giving a sensible sequence of instructions with little ambiguity. Timings for each step and the fine detail needed to carry out some of some processes (eg how do you prepare the veg?) are not specified.

Planning to Cook - continued

At Home

1. Wash hands
Put on aprons
Clean work surface
2. Wash, rinse and drain
lettuce
carrot
red pepper
3. Chopping board 1
Peel carrot
grate carrot
Lettuce leaves
core & slice
slice red pepper
Place in storage pots for school
4. Chopping board 2
butter two slices of bread and wrap in foil
Spoon some mayonnaise into storage pot
loose the chicken in shop packet
5. Storage for school
Pack all ingredients in cool bag with ice pack.
Clean and Clear up at home.
Take bag to Food Tech.
Do not forget apron
6. Lesson
Wash hands
Put on apron
Clean work surface
7. Unwrap bread
1. Unwrap bread
2. Place red pepper
3. Spread mayonnaise
4. Sprinkle grated carrot
5. Place chicken
6. place lettuce
7. add top slice of bread
8. Presentation
Cut sandwich in halves and display to show filling
Serve with nappies and discuss taste etc.

Level 6 - (part of story board shown) - The main stages are accurately broken down into smaller steps with detail instructions of the methods to be used. Clear reference to hygiene is good.

Pasta Dish Time Plan

Stage	Description	Health and safety	Time (min)
1.	Wash cooking area thoroughly with a cloth. Also wash your hands too	This gets rid of bad bacteria that could contaminate food	2
2.	Set up cooking area with equipment and ingredients needed	A clean and tidy kitchen is needed to be safe	1
3.	Dice, fairly small, the carrots, baby corn and green beans. Also separate the broccoli into smaller florets	Be careful when using a knife. If not done using the knuckle method fingers could be cut.	3-5
4.	Put the vegetables into a pan of boiling water and put on to boil	The very hot water could splash out and burn - be wary	10 (to cook)
5.	Put the dried pasta on to boil in a pan of water	(same as above)	15-20 (overlap)
6.	While keeping an eye on the pasta and veg (and the time) you can begin to make the sauce.	Make sure you keep an eye on the pans as they could boil over and they have hot water	(ongoing)

Level 7(+) - (only part of time plan shown) - This has clearly defined stages with detail description of each process. Timings and H&S are noted for each stage. In conjunction with the recipe and equipment list this is top level 7/8 work; only addition of photos could improve it.

Skills & Methods

You will be judged on how well you carry out a range of cooking techniques. The skill levels you demonstrate will show at what level you are capable of working. An extensive list of cooking techniques is given below - they are classified into the following skill levels:

- 👉 Easy (Level 5)
- 👉👉 Intermediate (Level 6)
- 👉👉👉 Advanced (Level 7/8)

Video demonstrations of most of these skills can be found on the BBC Food website at : <http://www.bbc.co.uk/food/techniques>

Due to time limitations not all techniques are formally taught - it's up to you to show off your higher skill levels when choosing your own recipes. A well-executed recipe requiring advanced skill levels can achieve a level 8 - or even Extended Performance - attainment.

General

- Weighing and Measuring 👉
- Cooking Pasta 👉
- Cooking Rice 👉
- Steaming Vegetables 👉

Meat, Poultry & Eggs

- Browning meat 👉
- Carving a cooked chicken into serving portions 👉
- Carving pork 👉
- Deboning / butterflying a leg of lamb 👉👉👉
- How to poach an egg 👉👉
- Jointing chicken 👉👉👉
- Preparing and cleaning chicken livers 👉
- Scoring skin
- Searing meat
- Separating eggs
- Spatchcocking chicken and poultry 👉👉
- Testing whether turkey, chicken and poultry are cooked 👉
- Whisking egg whites 👉

Preparing Fruit & Vegetables

- Chopping chillies 👉
- De-seeding tomatoes 👉
- Grating lemon zest 👉
- Dicing an onion 👉👉
- Finely chopping celery 👉
- Slicing an onion 👉
- 'Chiffonade' or shredding technique 👉👉
- 'Julienne' technique 👉👉
- Preparing artichoke hearts 👉👉
- Segmenting citrus fruit 👉👉
- Skinning peppers 👉
- Skinning tomatoes 👉
- Toasting and skinning hazelnuts 👉
- Zesting citrus fruit 👉
- Making melon balls 👉

Pasta

- Making pasta dough by hand 👉👉
- Rolling pasta using a pasta machine 👉👉
- Making Ravioli 👉👉👉

Skills & Methods (continued)

Desserts, Baking and Pastry

- Breaking chocolate 🍴
- Caramelising sugar with a blow torch 🍴🍴
- Creaming butter by hand 🍴
- Kneading bread 🍴
- Knocking back 🍴
- Shaping a loaf of bread 🍴
- Crimping the edge of a pastry 🍴
- Rubbing in 🍴
- Covering a pie with a pastry lid
- Lining a tart tin: trimming the pastry 🍴
- Lining a tart tin: preparing the pastry case for shrinkage 🍴
- Lining a tart with a cartouche (baking blind) 🍴🍴
- Making choux pastry 🍴🍴
- Wrapping a pudding for steaming 🍴🍴
- Making a crumble topping 🍴
- Preparing ramekins to cook soufflés 🍴
- Removing cakes from a cake tin 🍴
- Greasing and lining cake tins 🍴
- Using piping bags 🍴🍴
- Decorating a cake with chocolate transfer sheets 🍴🍴
- Melting chocolate 🍴
- Chaffing scone dough 🍴
- Folding 🍴
- Kneading bread with oil 🍴
- Proving 🍴
- Using fresh yeast 🍴
- Glazing with egg wash 🍴
- Rolling out pastry 🍴
- Lining a tart tin with pastry 🍴🍴
- Working with filo pastry 🍴
- Steaming a pudding 🍴🍴
- Removing vanilla seeds from pod 🍴
- Icing a cake with chocolate ganache 🍴
- Using a food processor to pulse ingredients 🍴
- Testing to see if a cake is cooked 🍴
- Whipping cream by hand 🍴

Fish and Shellfish

- Butterflying prawns 🍴🍴
- Choosing cooked lobster 🍴
- Cleaning and de-bearding mussels 🍴
- Cleaning and preparing squid 🍴🍴
- Filleting and skinning flatfish 🍴🍴
- Filleting round fish 🍴🍴
- Peeling prawns 🍴
- Removing the meat from cooked lobster 🍴🍴🍴
- Scaling, gutting and cleaning a round fish 🍴🍴

Sauces, Pastes and Condiments

- De-glazing pan gravy 🍴
- Skimming stock 🍴
- Thickening a roux to make béchamel sauce 🍴
- Thickening gravy using beurre manié 🍴
- Making a Creme Anglaise 🍴🍴
- Making herb butter 🍴
- Making a souffritto 🍴

This list is by no means definitive - check the BBC Food Techniques section for additions! Food Tech Resources on Sharepoint also has useful links to other cooking skills sites such as Jamie Oliver and Martha Stewart.

Some Sample Dishes



All the above dishes were devised, planned and cooked by KS3 boys as part of their Food lessons and clearly demonstrate their enthusiasm and commitment, as well as the high skill levels to which they have progressed as young chefs. Well done!

Some More Sample Dishes





Bread Rolls

Introduction to bread making!

You will learn the base skills for baking your own bread:
mixing, kneading, proving, portioning, shaping and baking.

You will be asked to follow a recipe and produce 6 identical bread rolls. They may be white or wholemeal/brown (depending on flour availability). The recipe has been developed to allow you to minimise the initial proving stage to meet the time constraints of the lesson.

Key assessment points are -

6 identical rolls; good, even brown colouring; good colour to underside of roll; light dry crust; hollow sounding when tapped; consistent even close-textured crumb to roll; properly cooked through; no large air pockets/gaps.



Level 5 - No two rolls the same shape or size; portion control not good; not fully proved; dense, floury mixture - probably too much flour used on work surface when kneading.



Level 6 - Some slight variation in portion control and roll sizes; perhaps just a little too long in baking although colour generally good;



Level 7 - Well shaped rolls; portion control good; well proved ready for the oven; baked rolls light with good even colour.

Baking

Sponge Buns

Early introduction to cake making is the basic sponge recipe.

Here you will make a batch of 12 identical sponge buns, topped off with half a glacé cherry.

Assessment points are -
 Cherry still on top (will sink if mixture too soft);
 nice domed shape; evenly filled bun cases; no overflow of mixture;
 sponge an even golden colour; light airy texture;
 dry but moist sponge - not soggy; consistent appearance to all of buns;
 no spillage on bun trays.



Scones

One of several options to extend your baking repertoire - produce a batch of 6/7 uniform scones for the class cream tea. We'll be looking for good height and even rise, golden colour, typical scone "cracking" around sides; easily split to reveal fully cooked, light and dry bread texture, ready for lashings of cream & jam!!



Level 5 - Over-filled bun cases; cherry sunk (mixture too soft); ingredients not weighed accurately; possibly too much sugar in sponge mixture - tops look 'wet'; not enough air in sponge - mixture over-beaten.



Level 5/6 - Slight variation in bun sizes; too pale - under-cooked, however most are nicely domed showing good rise and mixture consistency.



Level 6 - Good colour - even golden brown; all bun cases well filled producing same-size buns; nice rounded dome, springy to touch. The cherry was not included so no 'test' of mixture consistency.



Perfect Pizza

Pizzas are a firm 'fast food' favourite which, with some careful choices for the toppings, can surprisingly prove a pretty well balanced and nourishing meal. The Eatwell Plate food groups can easily be related to the ingredients of the pizza by approximate proportions, allowing you to show that you have kept nutritional balance in mind when selecting your toppings.

For this task we make our own pizza dough for the bread base, topping it with a tomato layer, cheese and up to 4 toppings. Presentation, flavours and a good bread base are key elements in assessing the quality of the pizza. Bread making skills, making your own tomato sauce and competent execution following descriptive cooking plans allow you to show how well you have progressed with your own cooking and kitchen craft.



Level 5 -

Irregular shape & thickness of crust;
Uneven distribution of toppings;
Uneven slicing and hence cooking of some toppings;
Bread base undercooked and in places soggy from excess moisture and fat from toppings;
Looks 'sloppy';



Level 6 -

Reasonable shape; looks tidy;
Good distribution of toppings;
Good combinations of textures, colours and flavours;
Base well cooked and risen;
Burning of tomato puree over edge of crust spoils appearance;



Level 7 -

Very good shape;
Stuffed crust adds to skill level;
Even cutting and distribution of toppings;
Good colour of cheese;
Good colour and texture to bread crust and base;
Little bit of toppings spilling over crust and edge only minus;

Evaluations

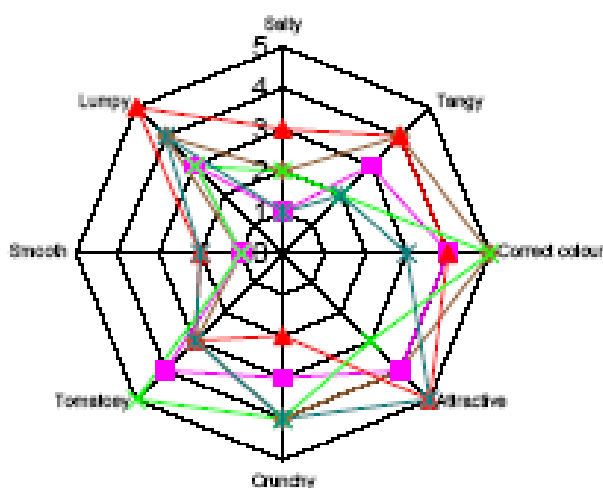
This is in fact THREE sections in one; and requires you to write in full detail if you want to get those higher levels.

1/ Taste isn't Everything!

Obviously you want to know if your food is appreciated but just getting a few personal comments of how nice it was just won't do! Make sure feedback is objective not subjective - it is always good to collect and write down a few comments but pin down your tasters to say why they liked your food (or otherwise). You can help them by giving them sensory descriptors - eg "how rich", "how sweet", "how salty", etc - to guide their feedback so you have something useful that actually describes your food and points the way to possible improvements.

Evaluate the key features of Appearance, Flavours & Textures; Use the Word Bank & Sensory Analysis list (on Sharepoint, Food Tech Resources) to help your tasters focus on specific sensory descriptors; use a points system 1 to 5 to describe their reactions (totally disagree to fully agree) to each descriptor and plot the results on a star diagram (again details on how to do this are on Sharepoint, Food Tech Resources link).

Level 7 - Extract from sensory analysis evaluation using 'Food for PC' star diagram as summary evidence of taster feedback for chosen descriptors



For correct colour and attractive I expected good results because to me it all looked good and the variety of colours of the vegetables in the sauce made it look attractive. For these two I got generally high results, which is good, apart from the two I got for the attractiveness. This is probably because that taster received a portion of sauce that didn't have vegetables in and so there was a lack of colour.

For crunchiness, I got high results and I wasn't expecting this. The crunchy vegetables such as the celery and carrots should have been softened while frying, but clearly this didn't happen, resulting in high scores. This should be noted for next time - to allow more time for the celery and carrots to soften.

As mentioned before, I put fresh tomatoes in the sauce. I wanted to know whether this affected the taste and so I used 'tomatoey' as a descriptor. I expected a mid-range to high result, and this is what I got.

Evaluations - continued

2/ How Did You Do?

Review of your own performance - timings, methods, use of equipment, hygiene, etc. Again specifics not general comments.

This is a good time to look at your planning - did your cooking plan have a few "holes" in it which left you wondering exactly how to carry out the instruction eg "Cook the vegetables" does not actually say if they should be fried, boiled, steamed, etc./

What aspects of the cooking did you find difficult (or easy, /) ... and WHY! Always include some explanation in each case; and how you coped with an unexpected difficulty.

Say something about the ingredients themselves - quality, ripeness, seasonality, changes to recipe, flavours, textures.

How did you manage your kitchen space? Was your Food Safety and hygiene good? Note areas that could be improved next time.

Working with a partner/in a team - effective or not?

Use of utensils and cooking equipment - identify your strong and weak areas, which processes you need to practise more.

Timings and multi-tasking - was everything completed as expected (timings should be on your cooking plan, /) And did all parts of the dish/meal come together at plating up and service?

Don't be too harsh on yourself - good self-appraisal will identify the individual key areas you need to work on. Just saying my knife skills suck won't help much unless you say why!

Extract from Extended Performance level report ...

Overall, I think the cooking session ran quite smoothly. My time plan was relatively accurate, and I kept to it well, and I was satisfied with the overall result. The skills and processes in making this Ragu are relatively basic, and I feel that I did relatively well, however, I think that the chopping of the vegetables could have been better, and the Ragu would have benefited from slightly more even, regular chunks of carrot, celery and onion.

Food hygiene was at times vital in the cooking session, the need to avoid cross contamination whilst handling the raw mincemeat is the main example. I am satisfied with my knowledge and execution of this: I used the red knives and chopping boards for the preparation and wash the equipment and my hands immediately afterwards. The other risks that I stated (see below) were managed and controlled successfully.

- Use all common knife precautions.
- Hot fat poses fire risk, heat and manage temperature carefully.
- Raw meat creates risk of cross contamination - Always prepare on red boards and wash equipment and hands after use.

Evaluations - continued

3/ Overall Review of Dish/Recipe

Key question - did the recipe/dish meet the aims of the task?

Higher level reviews will provide results that show if targets set at start of task were met or not. (See Recipe Development section)

Important to use results and feedback here - a great opportunity to use Nutritional Analyses for precise evidence of meeting nutritional targets and Sensory Analysis to indicate if Appearance-Flavour-Texture targets met.

Did you meet cost target? Provide costing!

Did you serve the required number of portions? Say how many it did feed and were they satisfied with the portion size!

You may have reviewed some of the aims already elsewhere but it doesn't harm to make passing reference again.

This overall review section is also the best place to write about recipe development suggestions and ideas, how to improve method, timings and execution, presentation enhancements, portion sizing, improving and broadening flavour and mouth-feel sensations, and so on. In other words ... what will I do better next time to make the whole cooking process more enjoyable & precise and (more importantly) to make the eating experience even more wonderful??

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Further examples of pupil work can be found on the school's Sharepoint site by following the Food Tech Resources link from the sidebar of the Design Department pages. You will be able to see samples of each of the target levels for KS3 (level 5 through to level 8 plus extended performance items) for each of the main areas covered here:

Understanding Food
Skills & Methods

Planning to Cook
Evaluations

Please spend some time reviewing these examples to help you get the level of detail and description into your written work to hit those higher levels.

