Aylsham High School

Food Preparation and Nutrition GCSE

TERM 1 – Practical & Theory Workbook

This booklet contains the recipes for all the dishes you will make during the course and is where you record and evaluate the skills and techniques you use and evaluate the dishes you make.

You will need to become proficient at using the Nutrition Program website to cost, evaluate and analyse the nutritional content of the food you make.

Website	www.nutritionprogram.co.uk	www.illuminate.digital/eduqasfood
User Name	SB1A ..... Initial of first and last names, followed by group	SAYL4
Password	gcse	STUDENT4

GCSE Food Preparation and Nutrition

Aims of the course

The Eduqas Food and Nutrition equips learners with

- the knowledge, understanding and skills required to cook and apply the principles of food science, nutrition and healthy eating.
- encourages learners to cook
- enables them to make informed decisions about food and nutrition and
- allows them to acquire knowledge in order to be able to feed themselves and others affordably and nutritiously, now and later in life.

Assessment

The GCSE course in Food Preparation and Nutrition is assessed by examination and through the completing of two Non-Examination Assessments.

The Exam

The 1 hour 45-minute written exam will be in early June, and is worth 50% of the qualification, or 100 marks. This is on the following 6 areas of content:

1.1. Food commodities
1.2. Principles of nutrition
1.3. Diet and good health
1.4. The science of food
1.5. Where food comes from
1.6. Cooking and food preparation

The Non-Examination Assessments

There are 2 non-examined assessments (NEAs) which you have to complete as part of your GCSE.

1. Non-Examination Assessment 1 (NEA1): The Food Investigation Assessment

Worth 15% of the qualification or 30 marks.
This is a scientific investigation into an area of food. All that means is that you investigate the different methods or ingredients used to make particular food. You so this by planning experiments, making a prediction about what you think will happen, conducting the experiments, drawing some conclusions about what happened and evaluating your method and prediction.

Some of the tasks set recently were to investigate chemical raising agents in scones, fats in shortcrust pastry and sugars in fairy cakes.

2. Non-Examination Assessment 2 (NEA2): The Food Preparation Assessment
   Worth 35% of the qualification or 70 marks.

The NEA2 is the food preparation assessment and represents 35% of the qualification. In this assignment you will be given a choice of two tasks. Once you have chosen your task you will need to investigate and plan the task, selecting a final menu which showcases your skills and a plan as to how you will cook it on the assessment day.

- Section A (worth 15 / 70 marks) is where you interpret and investigate the task. You will research, trial and select your dishes and write a plan for your practical session.
- Section B (worth 45 / 70 marks) is where you have a 3-hour session to showcase your technical skills. Demonstrate a wide range of technical skills and health and safety procedures when preparing, cooking and presenting your chosen dishes. Photographic evidence of the completed dishes is essential. You need to get all your washing up done too!
- Section C (worth 10 / 70 marks) is where you evaluate your assignment, you'll need to explain how well you selected, prepared, cooked and presented your final dishes.

The task might be about a special dietary need, a lifestyle choice or a special event. Some of the tasks set recently asked students to plan a celebratory Valentine's day hotel meal, a menu to serve at an event where street food is served and some lacto-vegetarian dishes to include on a restaurant menu.

We hope that you've chosen to do this course because you love cooking and eating food (we all do!) To help develop your interest in food and support your progress on the course there are some things you could do which are useful:

- Cooking, especially chopping vegetables – if you can't remember the methods we used this video is a pretty good guide - https://www.youtube.com/watch?v=G-Fg7l7G1zw ,
- Washing up and helping keep the kitchen clean and tidy (getting really good at this will help your NEA2 go super-smooth),
- Helping plan the family meals – websites like BBC Good Food are great, but so are the supermarkets' websites,
- Watching TV cookery programs,
- Following cooks and chefs on social media platforms like Twitter, YouTube and Instagram,
- Reading cookery books (some of them are as well written as a good novel),
- Looking at food magazines and restaurant menus (online and in the flesh)
- Thinking about ingredients and how they are used in recipes,
- Going food shopping with the family,
- Talking to butchers, fishmongers and other people involved in food,
- Finally, we normally encourage students to visit farmers markets, food festivals, and, if possible, restaurants. Sadly, none of these are not possible at the moment.

5 Steps to FOOD SAFETY

1 Be Clean, Be Healthy

Wash hand when necessary

Do not work with food if you are ill

Never touch ready-to-eat food with bare hands

2 Keep It Cool, Keep it Hot

Keep cold foods at 41°F / 5°C or below

Keep hot foods at 140°F / 60°C or above

3 Don't Cross-Contaminate

Don't store raw foods over cooked or ready-to-eat foods.

Never prepare ready-to-eat foods on the same surface or with the same utensils used to prepare raw animal proteins.

4 Wash, Rinse, & Sanitize

1. Wash

2. Rinse

3. Sanitize

Properly wash, rinse and sanitize all food contact utensils and equipment

5 Cook It & Chill It

Cook food until it reaches a proper internal temperature.

Rapidly cool food to 41°F / 5°C or below.

Health and Safety

Hazards in the Kitchen

There are many hazards in the kitchen. You need to think about these when you are planning to cook and whilst you are cooking. In your NEA2 you will need to list all the health and safety points you need to consider whilst cooking.

- Hot surfaces: cookers, burners, hobs, grills
- Hot equipment: pans, trays, kettle
- Sharp equipment: knives and blades
- Water: slips and trips – let me know
- Electricity, gas and water
- Chemicals: anti-bac, washing-up liquid
- Debris: slips and trips
- People: noise, collision, distraction, unsafe behaviours
- Flames: gas cookers, fires, etc.
- Bacteria: people, food, dirt, pests, bags.

Knife Safety

With good skills a chef will be safe, quick, efficient and produce good quality food.

- Never grab a falling knife
- Always cut away from yourself – never towards –using the whole of the knife's blade
- When you have a knife in hand, keep your eyes on the blade
- Carry a knife properly, pointed straight down
- Never put a knife in a sink full of water
- Clean knives safely with a brush in hot soapy water
- Only cut on a chopping board
- A sharp knife is a safe knife.
- To prevent cuts and grazes whilst cutting food always use the claw grip and the bridge hold.

Mise en place

(MEEZ ahn plahs) is a French term for getting your ingredients and equipment ready before you start cook. It is a technique chefs use to assemble meals so quickly and effortlessly.

This means:

- READ THE RECIPE AT LEAST Twice.
- Making sure that you and your workspace are clean and ready to cook – that you have followed all the personal hygiene recommendations.
- Having all your ingredients measured, cut, peeled, sliced, grated, etc.
- Pans are prepared.
- Mixing bowls, tools and equipment set out.

Personal hygiene

- Blue waterproof plasters in food areas.
- Hands and nails kept clean at all times – frequent washing.
- No jewellery as it harbours dirt and bacteria.
- No nail varnish - it chips and falls off and hides dirty nails.
- Clean apron or uniform.
- Should not be handling food with a heavy cold or flu. Always say if you have a cold or sore throat, boils, spots or septic wounds; diarrhoea, nausea or vomiting
- Hair should be tied back or covered.

HACCP

All food businesses have in place a HACCP (Hazard Analysis Critical Control Point) assessment to make sure that food is safe to eat. Every aspect of food hygiene and safety is monitored for hazards. You need to make sure that you and your workspace are
Hazards can be:

- Physical hazards (hair, jewelry, finger nails, flies, plasters, griot, bone, metal machinery parts) can cause choking, broken teeth, internal cuts and bruising.
- Chemical hazards (cleaning products and pesticides) can cause liver and nerve damage and internal burns.
- Biological hazards (bacteria, viruses, mould, fungi) can all cause food poisoning.

In your practical assessment you have just 3 hours to prepare, cook, wash up and present your 3 dishes. For all the recipes you cook this year you should think about how you can make them as quickly and efficiently as possible. Thinking carefully about what you do for your preparation / mise en place and make sure you clear and clean your workspace as you go.

The 4 C's of Food Safety

Clean

Cook

Chill

Cross Contamination

Food poisoning

Common causes of food poisoning

- Food is prepared too far in advance
- Cooked food is cross contaminated by raw food
- Food is cooled too slowly
- Food is undercooked
- Food isn't reheated enough to kill all the bacteria in it.
- Hot food is kept at a temperature of less than 63˚C.

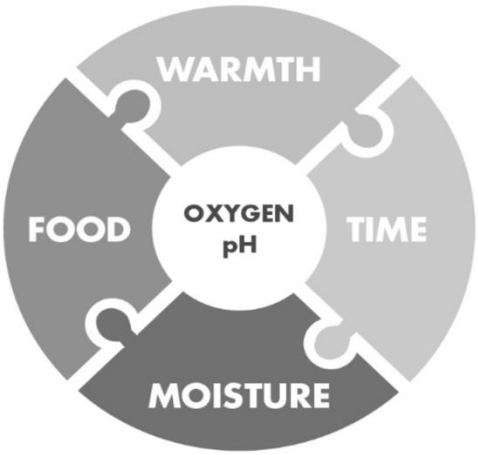


Fig 1.
Bacteria need warmth, time, moisture and food to grow. Some also need oxygen and a specific pH.

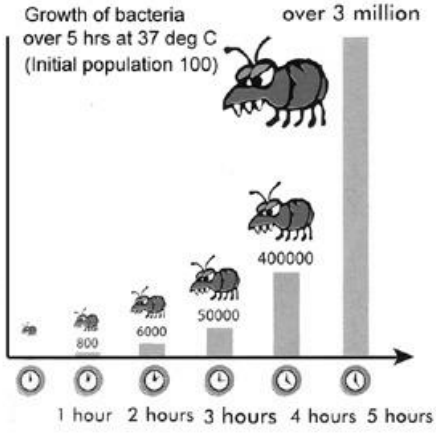
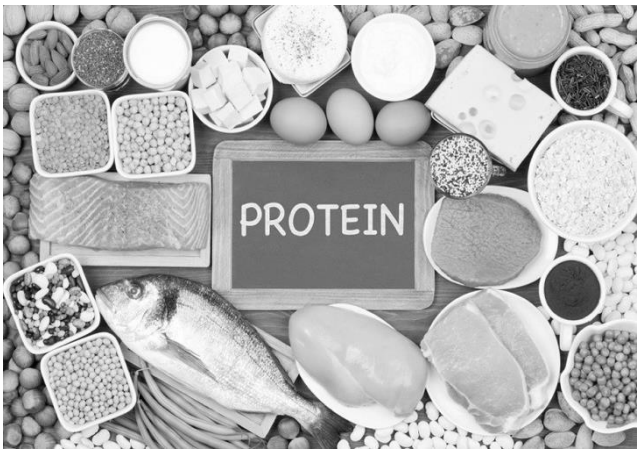


Fig 2. In the right conditions bacteria reproduce very quickly.

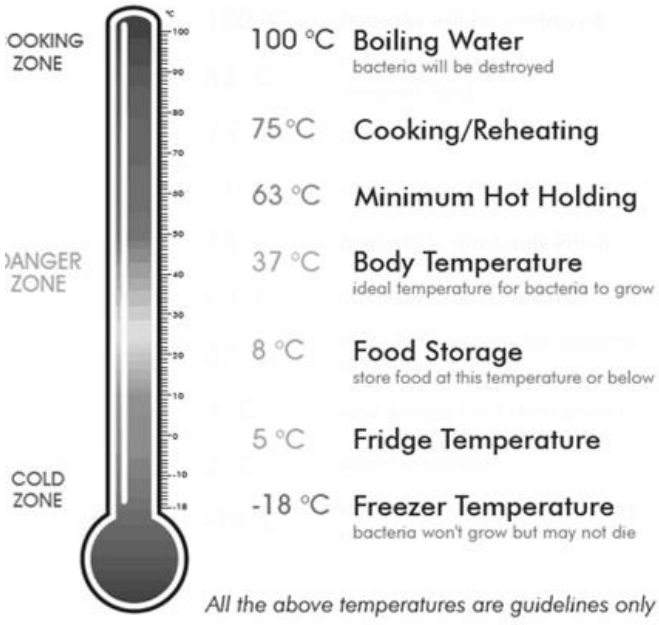


High Risk Foods

High risk foods are foods high in protein and moist. At 75ºC, most bacteria will die. We need to temperature probe the meat to ensure its hot enough.

The Danger Zone

This is the name for the range of temperatures best suited for bacterial growth, 5ºC to 63ºC.
The longer food is kept in the danger zone, the greater the opportunity for bacteria to grow and the greater the possibility of food poisoning.

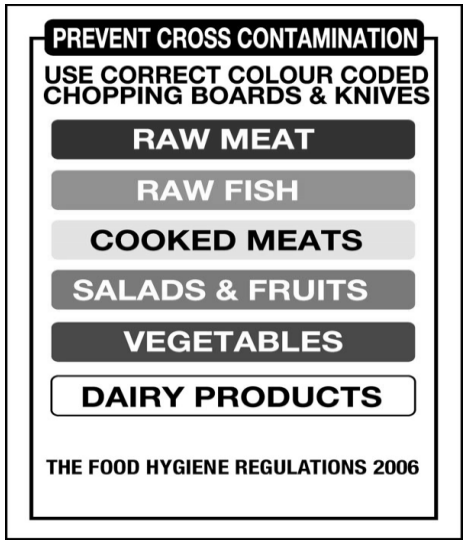


Reheating Food at Home

Your dishes will be refrigerated within an hour of you making them. They can be reheated at home, but only once. Food can be reheated in a microwave (transfer it to a microwavable dish first) until steaming hot, or in the oven at 190oC for 15 to 20 minutes. Check it's piping hot, with a temperature probe if you have one - you will be looking for a temperature of 75oC or above in the centre of the food.

Preparation and Cooking

- To prevent cross contamination, make sure to use the correct colour chopping board.
- Check ingredients are in date and fit for use
- Wash fruit and vegetables before use.
- To kill food poisoning bacteria food must be cooked at the right temperature for the right amount of time.
- Fully defrost frozen foods before cooking.
- Always check the core temperature.
- Clean and sanitise before and after use.
- High risk foods must be at least 75˚C in the middle to be safe.
- Stir often to avoid cool spots or split large amounts of liquid into smaller pans.



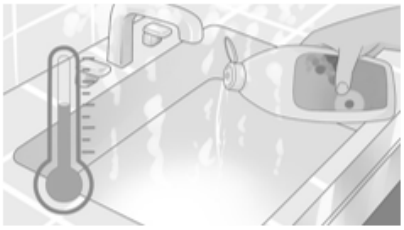
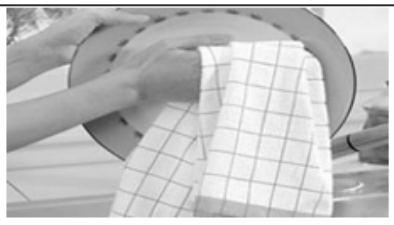
Cooling

- Cool rapidly so that the food is in the danger zone for the least amount of time.
- DO NOT put into the fridge to cool down.

Washing Up

To prevent bacteria and mould growing on wet and dirty surfaces it is important to keep food preparation areas clean and dry. This means:

- sanitising surfaces before cooking,
- washing up and drying equipment thoroughly before putting it away and
- keeping surfaces wiped down.

 Scrape unused food into the bin or composting bin.	 Stack your dishes on the opposite side of the sink from the draining board.
 Fill your washing up bowl with comfortably hot water; add 2 – 3 squirts of washing up liquid.	 Use a washing up brush to clean the dishes and a scouring pad on tougher dirt.
 Dry everything thoroughly with a tea towel and put away in the correct place. Take care when stacking items – larger ones at the bottom.	 Wet and wring out the dishcloth then clean sink, draining board and your workbench. Leave everything clean and nearly dry.

Skills Groups and Techniques Table

The next 4 pages list all the skills and techniques you will be using on the course. You can maximise the number of marks you get in your NEA2 practical by using as many as you possibly can (as long as you can execute them well).

Skill	Food prep skills	Techniques	Examples of where I used these techniques
S1	Knife Skills	Be able to demonstrate the following techniques for fruits and vegetables and, where appropriate, also those that relate to meat and fish or their alternatives: • meat, fish and alternatives - fillet a chicken breast, portion a chicken, remove fat and rind, fillet fish, slice raw and cooked meat and fish or alternatives (such as tofu and halloumi) evenly and accurately • fruits and vegetables - bridge hold, claw grip, peel, slice, dice and cut into even size pieces (i.e. batons, julienne)	....
S2	Prepare fruits and vegetables	Be able to demonstrate the following techniques: • mash, shred, scissor snip, scoop, crush, grate, peel, segment, de-skin, de-seed, blanch, shape, pipe, blend, juice and prepare garnishes whilst demonstrating the technical skills of controlling enzymic browning and spoilage and preventing food poisoning (wash and dry where appropriate)	....
S3	Prepare, combine and shape	Be able to demonstrate the following techniques: • roll, wrap, skewer, mix, coat, layer meat, fish and alternatives, and shape and bind wet mixtures (such as falafels, fish cakes or meatballs) whilst demonstrating the technical skill of preventing cross contamination and handle high risk foods correctly	....

Skill	Food prep skills	Techniques	Examples of where I used these techniques
S4	Tenderise and marinate	Be able to demonstrate how acids denature protein and marinades add flavour and moisture when preparing vegetables, meat, fish, and alternatives	....
S5	Select and adjust a cooking process	Be able to demonstrate the following techniques: • select and adjust the cooking process and length of time to suit the ingredient, for example to match the cut of meat, fish and alternatives	....
S6	Weigh and measure	Be able to demonstrate accurate measurement of liquids and solids	.....
S7	Preparation of ingredients and equipment	Be able to demonstrate the following techniques: • grease/oil, line, flour, evenly and with attention to finished product	....
S8	Use of equipment	Be able to demonstrate the following techniques: • use a blender, food processor, mixer, and microwave	....
S9	Water based methods using the hob	Be able to demonstrate the following techniques: • steaming • boiling and simmering • blanching • poaching	....
S10	Dry heat and fat based methods using the hob	Be able to demonstrate the following techniques: • dry frying • pan (shallow frying) • stir frying	....
S11	Using the grill	Be able to demonstrate the following techniques with a range of foods, such as vegetables, meat, fish or alternatives such as halloumi, seeds and nuts: • char • grill or toast	....

Skill	Food prep skills	Techniques	Examples of where I used these techniques
S12	Using the oven	Be able to demonstrate the following techniques: • baking • roasting • casseroles and/or tagines • braising	…… …… …… ……
S13	Make sauces	Be able to demonstrate the following techniques: • make a blended white sauce (starch gelatinisation) such as a roux and all in one blended sauce, infused sauce, velouté, béchamel, to demonstrate understanding of how liquid/starch ratios affect the viscosity and how conduction and convection work to cook the sauce and the need for agitation • make a reduction sauce such as pasta sauce, curry sauce, gravy, meat sauce (including meat alternatives such as myco-protein and textured vegetable protein) to demonstrate how evaporation concentrates flavour and changes the viscosity of the sauce • make an emulsion sauce such as a salad dressing, mayonnaise, hollandaise to demonstrate the technical skill of how to make a stabilised emulsion	…… …… …… …… …… …… …… …… …… …… …… …… …… …… …… …… …… …… ……
S14	Set a mixture - removal of heat (gelation)	Be able to demonstrate the following techniques: • use starch to set a mixture on chilling for layered desserts such as custard or cheesecake	…… …… ……
S15	Set a mixture - heating (coagulation)	Be able to demonstrate the following techniques: • use protein to set a mixture on heating such as denatured protein in eggs for quiche, choux pastry	…… …… ……

Skill	Food prep skills	Techniques	Examples of where I used these techniques
S16	Use of raising agents	Be able to demonstrate the following techniques: • use egg (colloid foam) as a raising agent - create a gas-in air foam - whisking egg whites, whisked sponge • use chemical raising agents - self raising flour, baking powder, bicarbonate of soda • use steam in a mixture (choux pastry, batter)	....
S17	Make a dough	Be able to demonstrate the following techniques: • use the technical skills of shortening, gluten formation, fermentation (proving) for bread, pastry, pasta	....
S18	Shaping and finishing a dough	Be able to demonstrate the following techniques: • roll out pastry, use a pasta machine, line a flan ring, create layers (palmier), proving/resting • glazing and finishing such as pipe choux pastry, bread rolls, pasta, flat breads, pinwheels, pizza, calzone	....
S19	Test for readiness	Be able to demonstrate the following techniques: • use a temperature probe, knife/skewer, finger or 'poke' test, 'bite', visual colour check or sound to establish whether an ingredient or recipe is ready	....
S20	Judge and manipulate sensory properties	Be able to demonstrate the following techniques: • how to taste and season during the cooking process • change the taste and aroma through the use of infusions, herbs and spices, paste, jus, reduction • how to change texture and flavour, use browning (dextrinisation) and glazing, add crust, crisp and crumbs • presentation and food styling – use garnishes and decorative techniques to improve the aesthetic qualities, demonstrate portioning and presenting	....

NOTES

WEEK	RECIPE	SKILLS AND TECHNIQUES	THEORY	PAGE
1	Chelsea Buns	Enriched dough, kneading, proving, forming, baking, finishing.	Course outline	15
2	Vegetable rosti & salsa	Knife skills – preparing fruit and vegetables, saute.	Examination Questions on Health and Safety	18
3	Lemon Meringue Pie	Pastry making, meringue, denaturation, coagulation, gelatinization.	Meringue theory	24
4	Swiss roll	Whisked sponge, mechanical raising agent, baking, rolling.	Cake making Exam paper Section A; visual stimuli question	27

Recipes, Evaluations, Questions & Tasks

Getting the recipe right

Make sure you understand the recipe before you start cooking. If you've read the recipe and used all the resources you have been given and you're still not sure you could ask someone at home, check with your teacher through Google Classroom or by email or Google the recipe and see if there's a handy video of a chef making it.

Evaluations

Once you've made each dish you will need to taste and evaluate them. This means saying how good you think it is. In order to evaluate a dish you need to have an idea of what it would be like if it was perfect; how you want it to taste and smell, what you want it to look like and what the texture should be.

GCSE FOOD PREPARATION & NUTRITION

RECIPE 1: Chelsea Buns

INGREDIENTS

For the dough

- 500g strong white flour, plus extra for dusting
- 1 tsp salt
- 1 x 7g sachet fast-acting yeast
- 275- 300ml milk
- 40g unsalted butter
- 1 free-range egg, beaten
- vegetable oil, for greasing

For the filling

- 25g unsalted butter, melted
- ¼ orange, zest only, grated
- 75g caster sugar
- 2 tsp ground cinnamon
- 100g mixed fruit

To finish

- 1 heaped tbsp marmalade
- 100g icing sugar, sifted
- ¼ orange, zest only, grated

EQUIPMENT

-Large & small mixing bowl
-Small saucepan
-Scales
-Wooden spoon
-Pastry brush
-Clean tea towels
-Tablespoon (tbsp)
-Teaspoon (tsp)
-Round baking dish
-Baking tray
-Grater/zester
-Lemon squeezer
-Rolling pin
-Sieve

METHOD

Mise en place

1. Weigh out all the ingredients.
2. Preheat oven to 190C/375F/Gas 5.
3. Warm the milk and butter in a small saucepan until the butter is melted and the mixture is lukewarm.

What other ingredients could you prepare for your mise en place?

Order of work:

1. DOUGH: Place the flour and salt into a large mixing bowl and stir until thoroughly combined. Make a well in the centre of the flour and add the yeast.
2. Pour milk mixture into the flour mixture, add the egg and stir thoroughly until the contents of the bowl come together as a soft dough.
3. Tip the dough onto a lightly floured work surface and knead well for five minutes, until the dough is smooth and elastic.
4. Place the dough into an oiled bowl and leave to rise, covered with a damp tea towel, for one hour or until doubled in size.
5. Tip the dough out onto a lightly floured work surface. Roll out dough into a rectangle about 30x20cm/12x8in.
6. FILLING: Brush all over with the melted butter. Evenly sprinkle half of the orange zest over the buttered surface, followed by the sugar, cinnamon and dried fruit.
7. Tack down the long side of the dough rectangle nearest to you by pressing it down onto the work surface with your thumb. Roll the opposite long side of the dough towards you quite tightly, until the roll is complete and tight. With a sharp knife cut into thick rounds - about 4cm/1¾in.
8. Grease two round foil dishes

Health and safety points

Wash hands after cracking the egg.

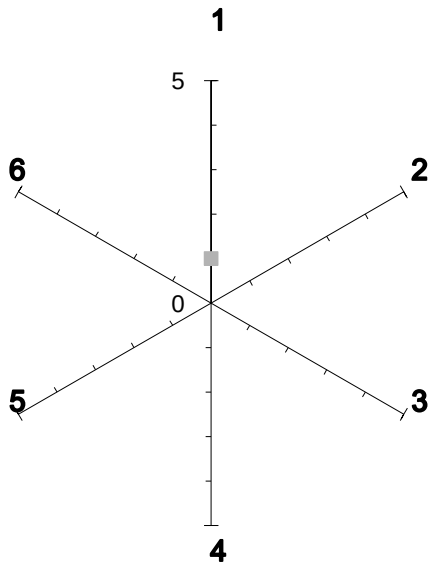
Make sure milk does not boil, as will kill the yeast.

Use oven gloves when placing in the oven.

9. Place the buns, cut side up, into the greased foil dishes leaving about 1cm/½in of space between each one. You want them to be close enough so that when they rise further and then bake, they will bake with their sides touching. They can then be pulled apart and you get a lovely soft edge. 10. Leave to rise for about 30 minutes in a warm place. 11. When the buns are ready, put them in the oven and bake for 20-25 minutes until golden-brown. Check after 15 minutes or so and cover the buns with foil if they are getting too brown. 12. Remove the buns from the oven and let them cool slightly before transferring them from the tin to a cooling rack. 14. TO FINISH: Melt the marmalade in a small saucepan with a splash of water until smooth. Brush the jam over the buns to glaze and allow to cool. 15. Mix together the icing sugar, the remaining orange zest and two tablespoons water. Drizzle the icing over the cooled buns and allow to set before serving.	Wash up in hot soapy water. Dry thoroughly with tea towel before putting away.

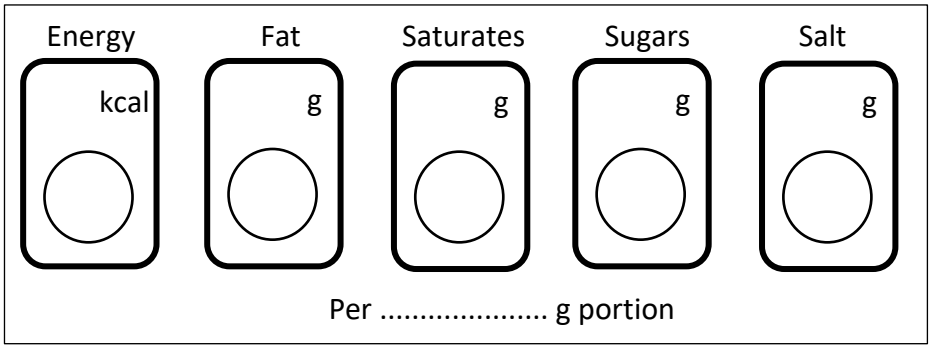
Evaluation of the dish

1. Transfer the skills you used today to the skills log on pages 10 - 13.
2. Before we prepare a dish, decide on the desired sensory descriptors (these should describe how you want this dish to taste and smell, what you want it to look like and what its texture should be like) and write these in before you make the dish.
3. Once you've eaten the dish, give it a mark out of 5 for each descriptor and record it in the score column.
4. Transfer the marks for each sensory descriptor onto the star chart (the numbers on the star chart should correspond to the numbers in column 1).
5. Say what you liked about the dish and what improvements you could have made.

Sensory quality	Sensory descriptor (in depth and accurate)	Score / 5	Star Chart
1 – taste			
2 – texture			
3 – aroma			
4 – appearance			
5 – presentation and food styling			
6 – portion size			

What I liked	…… …… ……
Suggested improvements	…… …… ……

Use the Nutrition Program to analyse the nutritional content of this dish. See the front cover for your login details and the AHSFoodies YouTube video or appendix 1 to remind you how to use the program. Enter the names and amounts of all the ingredients and use the program complete the following.
Use the information on the Food Label tab to complete this traffic light system.



GCSE
FOOD PREPARATION & NUTRITION

RECIPE 2
VEGETABLE ROSTI CAKES

INGREDIENTS

- 2 potatoes
- 1 carrot
- ½ swede or 1 parsnip
- 1 courgette
- 4 spring onions
- 2 tbsp plain flour
- 1 egg
- Sunflower/vegetable oil
- Salt and pepper

EQUIPMENT

- Vegetable peeler
- Chopping knife
- Chopping board
- Saucepan
- Coarse grater
- Large mixing bowls
- Fork
- Tablespoon
- Frying pan
- Fish slice
- Serving dish
- Colander
- Jug

METHOD

Mise en place

1. Wash and peel potatoes, carrots and parsnips or swede, leaving whole.
2. Place root vegetables and potatoes into saucepan and cover with cold water.
3. Beat the egg in a jug.
4. Weigh the flour into a large bowl.
5. Wash the courgettes and spring onions.

Order of work

1. Par boil the vegetables for 10mins, they should still be firm in the middle.
2. Drain them through a colander, then place them in a pan of cool water and leave to cool.
3. Coarsely grate the courgettes and chop the spring onions, drain any liquid off through a sieve and add to the bowl with the flour in it.
4. Coarsely grate the parboiled vegetables into the large bowl and stir all vegetables together with the flour, egg and seasoning. Divide the mixture into 4-6 portions.
5. Lightly oil a frying pan and cook the rosti until crisp and golden on both sides. Flatten with a fish slice as they cook. They will need about 3-4 minutes on each side.

Health and safety points

Wash hands after cracking the egg.

Use correct holds when peeling and chopping vegetables to prevent cuts.

Drain the vegetables into a colander in a sink to avoid scalding.

SKILLS USED

- Weighing and measuring
- Knife skills
- Vegetable preparation
- Grating
- Boiling
- Shallow frying
- Testing for readiness

FOOD QUALITY CONTROLS

- Even size, shape and thickness.
- Firm texture and well-seasoned.
- Even browning.
- The type of potato is important – use a floury main crop potato, like Maris Piper or King Edward – a mashing or baking potato.
- Other root vegetables, like sweet potato and parsnip can be used in place of the carrot or swede.

FOOD SCIENCE

- Coagulation of the egg to bind ingredients together
- Effect of heat on cooking the vegetables changes the texture and colour

GCSE
FOOD PREPARATION & NUTRITION

RECIPE 2
SALSA

INGREDIENTS

- 3 medium tomatoes
- ½ red onion
- 1 small clove of garlic
- ½ tsp white wine vinegar
- ½ lime, juice only
- ½ bunch coriander

EQUIPMENT

- Mixing bowls
- Saucepan of boiling water
- Slotted spoon
- Sharp knife
- Chopping board
- Tablespoon
- Teaspoon
- Lemon squeezer

METHOD

1. To peel tomatoes:
   - Have pan of boiling water and a bowl of cold water ready.
   - Cut a cross on the bottom of each tomato.
   - Drop the tomatoes into the boiling water for 1-2 minutes – take them out when the skin stars to peel back, this is when they are ready to peel.
   - Then plunge them into cod water to stop cooking process. They should still be firm.
   - Peel the skins off.
2. Cut in half, take out seeds with a teaspoon, finely dice and place in a mixing bowl.
3. Finely dice the red onion and add to tomatoes.
4. Juice the ½ lime, roughly chop the coriander and crush garlic, add to tomato and onions.
5. Add the rest of the ingredients and mix.
6. Refrigerate until ready to serve.

Health and safety points

Use correct holds when peeling and chopping vegetables to prevent cuts.

Be careful with boiling water, do not splash and make sure the pan handle is not sticking out.

SKILLS USED

- Weighing and measuring
- Knife skills
- Vegetable preparation

FOOD QUALITY CONTROLS

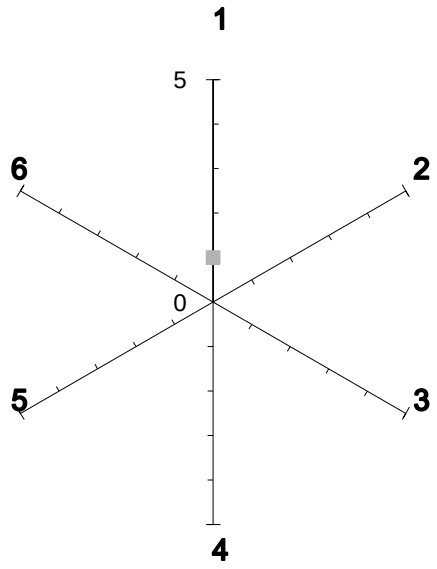
- Tomatoes should still be firm.
- Dice should be even sizes.

FOOD SCIENCE

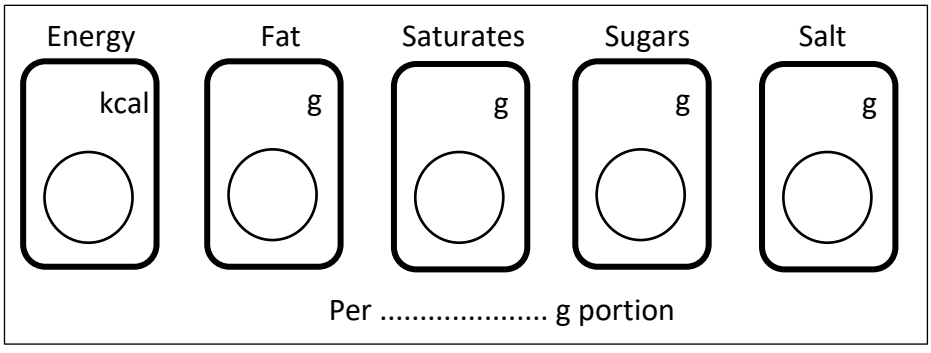
- The lime juice will prevent enzymic browning.

Evaluation of the dish

6. Transfer the skills you used today to the skills log on pages 10 - 13.
7. Before we prepare a dish, decide on the desired sensory descriptors (these should describe how you want this dish to taste and smell, what you want it to look like and what its texture should be like) and write these in before you make the dish.
8. Once you've eaten the dish, give it a mark out of 5 for each descriptor and record it in the score column.
9. Transfer the marks for each sensory descriptor onto the star chart (the numbers on the star chart should correspond to the numbers in column 1).
10. Say what you liked about the dish and what improvements you could have made.

Sensory quality	Sensory descriptor (in depth and accurate)	Score / 5	Star Chart
1 – taste			
2 – texture			
3 – aroma			
4 – appearance			
5 – presentation and food styling			
6 – portion size			
What I liked	…… …… ……		
Suggested improvements	…… …… ……		

Use the Nutrition Program to analyse the nutritional content of this dish. See the front cover for your login details and the AHSFoodies YouTube video or appendix 1 to remind you how to use the program. Enter the names and amounts of all the ingredients and use the program complete the following.
Use the information on the Food Label tab to complete this traffic light system.



KNIFE SKILLS – PREPARING FRUIT AND VEGETABLES

1 There are many types of knife for use with different foods. You should always choose the correct knife for the job.

2 Make sure your knives are kept sharp.

Bridge hold – onion – vegetable knife

1 Place the onion on a chopping board.

2 Cut the onion in half lengthways, from root to tip; cut the top off.

3 Now peel the skin away from the onion.

4 Place the onion flat side down on the chopping board.

5 Now cut vertically, making two or three cuts. Make sure you keep the onion intact – do not cut through the root.

6 Grip the onion using the bridge hold with your fingers on one side and your thumb on the other.

7 Using the claw grip, cut the onion finely downwards from the top of the onion to the bottom, then cut off the root.

Examination Questions on Health and Safety

1. Studies show that many kitchens contain the most germs in the home. [6 marks]

For each of the following, list 2 rules to help prevent the spread of germs.

(a) Personal hygiene [2]

(i) .....

.....

(ii) .....

.....

(b) Kitchen hygiene [2]

(i) .....

.....

(ii) .....

.....

(c) Storage of foods [2]

(i) .....

.....

(ii) .....

.....

2. Bacteria in food can cause food poisoning. [5 marks]

For each of the following, list 2 rules to help prevent the spread of germs.

(a) Name 2 high risk foods [2]

(i) .....

(ii) .....

(b) Explain the importance of using colour coded equipment when handling and preparing food. [3]

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3. The following foods are to be served at a buffet.

Sausage rolls
Egg sandwiches
Chicken drumsticks

Discuss how to keep these foods safe to eat when preparing, cooking and serving the buffet. [9]

GCSE

FOOD PREPARATION & NUTRITION

RECIPE 3; LEMON MERINGUE PIE

INGREDIENTS

For the pastry:

- 200g(7oz) plain flour
- 115g(4oz) butter
- 25g(1oz) caster sugar
- ½tsp salt
- 3-4 tbsp cold water

For the filling:

- 100ml water
- 75g caster sugar
- 25g cornflour
- 25g butter
- 1 lemons, zest and juice
- 2 egg yolks

For the meringue:

- 2 egg whites
- 100g caster sugar

EQUIPMENT

- Mixing bowl
- Mixing spoon
- Sharp knife
- Palette knife
- Small saucepan
- ½ teaspoon
- Flan dish (18cm)
- Whisk or electric mixer
- Grater / zester
- Juicer
- Rolling pin
- Flour dredger
- Sieve
- Piece of tin foil
- Baking beans
- 3 small jugs
- 3 small bowls

METHOD

Mise en place

1. Set oven to 200ºC / gas mark 6.
2. Weigh the flour and butter. Sieve the flour into a mixing bowl and add the butter in small cubes.
3. Using three small jugs separate the eggs, making sure no yolk is mixed with the white.
4. Weigh the sugar and cornflour into a small bowl.
5. Zest and juice the lemon into a small saucepan and add the water.
6. Weigh the butter into a small bowl.
7. Weigh the sugar for the meringue into a small bowl.

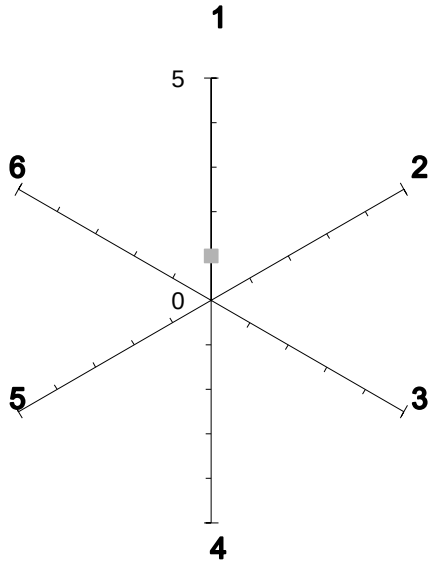
Order of work

9. **Make the pastry:** rub the butter into the flour and salt until the mixture resembles fine breadcrumbs. Add the water a little at a time until the pastry forms a dough. Leave the pastry to rest in the refrigerator for 30 minutes.
10. **Make the filling**: Cream the egg yolks, sugar and cornflour together. Bring water, lemon juice and zest to the boil, then add the butter. Stir until it melts. Pour the boiled lemon mixture onto the egg yolk mixture and strain through a sieve. Return to the pan and cook on a low heat until thickened. Spoon it into the cooked pastry case and allow to cool and set.
11. **Line the pastry case:** Dust your work surface with flour, remove your pastry from the fridge and roll out to a thickness of 3-4mm, rotating regularly to ensure the pastry doesn't shrink unevenly. Pick up the pastry using a rolling pin and drape over the tin. Gently mould the pastry into the tin. Trim the pie by running a palette knife around the edge.
12. **Blind bake the pastry case** by lining it with tin foil and baking beans (if available) and bake in the oven for 10-15 minutes.
13. **Wash up.**
14. Remove the beans and the foil from the tin and bake until the pastry is pale golden brown.
15. Spoon the lemon filling into the pastry case and allow it to cool and set.
16. **Make the meringue:** Whisk the egg whites until forming soft peaks. Slowly add half the sugar whilst still whisking. Fold in the remaining sugar. Pipe or spoon the meringue over the lemon filling.
17. Bake for about 10-15 minutes at 150ºC/Gas 4 until meringue is golden brown

Name of dish:

Evaluation	
C	colour/ contrasts of colours
A	aroma/smell
T	texture/ 'mouth feel'
FL	flavours
A	appearance/shapes/contrasts
P	portioning/ position on plate
S	suggested improvements

Key skills and techniques
1.
2.
3.

	Sensory quality descriptor (in depth and accurate)	Score / 5	Star Chart
1 – taste			
2 – texture			
3 – aroma			
4 – appearance			
5– colour			
6 – spare			

Lemon Meringue Pie

Meringue video questions

1. Describe the different textures you can achieve in a meringue.

   ……

   ……

2. What is captured in the liquid foam when meringues are created?

   ……

3. Why is important to make sure that all your equipment is grease free when making meringues?

   ……

4. What should the whites look like at the soft peak stage?

   ……

5. What happens if the mixture is over-whisked?

   ……

6. What should the mixture look like when you have finished?

   ……

7. What type of foam has been created?

   ……

8. What does the heat of the oven do to the meringues?

   ……

9. What makes the meringue turn brown?

……

GCSE

RECIPE 4

FOOD PREPARATION & NUTRITION WHISKED SPONGE - SWISS ROLL

INGREDIENTS

- Cake
- 3 eggs
- 75g caster sugar
- 75g plain flour
- a little extra sugar
- Filling
- 50g butter, softened
- 150g icing sugar
- ½ tsp vanilla essence
- 2-3 tbsp jam

EQUIPMENT

- Mixing Bowl
- Table spoon
- Jug
- Spatula
- Baking tray:
- Electric whisk
- Palette Knife
- Sieve

METHOD

Mise en place

1. Set the oven, Gas 6/200ºC.
2. Line a Swiss roll tin with greaseproof paper. Grease the paper.
3. Weigh ingredients and sieve the flour onto a plate.
4. Crack the eggs into a small bowl or jug and beat with a fork.

Order of work

1. Whisk the eggs and sugar until thick in a glass or metal bowl.
2. Sieve the flour again onto the egg mixture. Gently fold in the flour using a metal spoon or palette knife.
3. Pour the mixture into the prepared tin. Bake for 8-10 minutes until golden brown and springy to the touch.
4. Whilst the cake is baking:
   i. Lay a piece of greaseproof paper on a damp tea towel and sprinkle a little sugar onto it.
   ii. Have the jam, sharp knife and palette knife ready to finish the Swiss roll.
5. Tip the baked Swiss roll on to the sugared paper. Carefully peel off the lining paper. Trim the edges of the Swiss roll and roll up using the tea towel and paper.
6. Prepare the buttercream - put the butter into a large mixing bowl. Blend in the sugar, a quarter at a time, beating well after each addition, and continue mixing until light and fluffy. Mix in the vanilla essence ensuring it has been evenly distributed. Keep icing covered until ready to decorate
7. Spread it with jam and then the buttercream
8. Using the paper, roll it up. Cool on a wire rack.
9. Wash up thoroughly.
10. Keep the Swiss roll in an airtight container eat within 2 days.

Health a & Safety points

Wash hands after cracking the eggs.

Use oven gloves when moving food into and out of the oven.

Keep high risk foods (butter) in the fridge until required to prevent bacterial growth.

If using an electric whisk ensure your hands are dry, that you do not get electrical equipment wet, take care with trailing leads and clean with a well wrung out cloth.

SKILLS USED

- Prepare, combine and shape
- Weigh and measure
- Preparation of ingredients
- Using the oven
- Using a raising agent – whisking
- Test for readiness

WHISKED SPONGE – SWISS ROLL (1 OF 2)

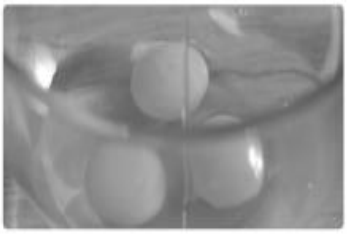
1 Pre-heat the oven to Gas mark 6 / 200°C (190°C fan).

2 Oil the base and sides of a Swiss roll baking tin and line it by placing greaseproof paper over the oil. Smooth it down and push it into the corners.

3 Make a diagonal cut at each corner. Push the sides down.

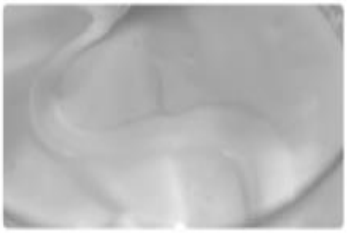
4 Lightly grease the lining.

5 Place the eggs into a bowl and whisk lightly.



6 Add 75g of caster sugar and whisk the mixture for several minutes until it is pale and thick.

7 Run a trail of mixture coming from the whisk across the surface. It should leave a visible trail for at least 5 seconds. If you cannot see the trail, the mixture is too thin and needs more whisking.



8 Sieve the flour onto a plate or piece of greaseproof paper. Then sieve the flour into the whisked mixture in three stages.

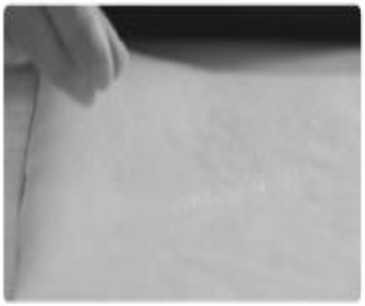
9 At each stage, gently fold the flour into the mixture, using a metal spoon in a figure of eight pattern.

10 When all the flour has been folded in, pour the mixture into the prepared tin. Make sure the mixture is spread evenly.

WHISKED SPONGE – SWISS ROLL (2 OF 2)

11 Place in the oven and bake for 10–12 minutes. It should be spongy to the touch and have started to shrink away from the edges of the tin.

12 Whilst the sponge is baking, place a piece of greaseproof paper on the table and sprinkle this with a little caster sugar.



13 When the sponge is baked, carefully remove it from the oven, using oven gloves. Gently tip the sponge away from you onto the greaseproof paper so that the brown side lands directly onto the sugar.

14 Carefully peel off the paper.

15 Trim a little off the edges of the sponge with a sharp knife.

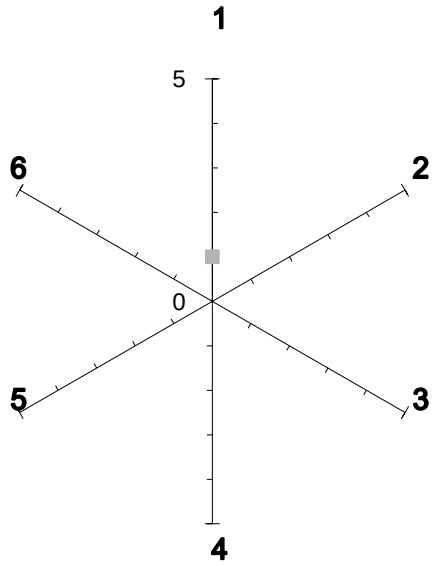
16 Spread the softened jam over the sponge.

17 Make a small indentation about 1 cm from the edge, across the bottom width of the sponge.

18 Roll up the sponge tightly and leave it to cool.

Evaluation of the dish

1. Transfer the skills you used today to the skills log on pages 10 - 13.
2. Before we prepare a dish, decide on the desired sensory descriptors (these should describe how you want this dish to taste and smell, what you want it to look like and what its texture should be like) and write these in before you make the dish.
3. Once you've eaten the dish, give it a mark out of 5 for each descriptor and record it in the score column.
4. Transfer the marks for each sensory descriptor onto the star chart.
5. Say what you liked about the dish and what improvements you could have made.

Sensory quality	Sensory descriptor (in depth and accurate)	Score / 5	Star Chart
1 – taste			
2 – texture			
3 – aroma			
4 – appearance			
5 – presentation and food styling			
6 – portion size			
What I liked	…… …… …… …… ……		
Suggested improvements	…… …… …… …… …… …… ……		

WEEK 4 CAKE MAKING QUESTIONS

Section A: General Cake Questions

1. Complete the table to show some of the functions of each of the main ingredients in cake making:

Ingredient	Functions
Flour	
Eggs	
Sugar	
Fat	

2. Match the 5 different methods of making cakes with an example.

RUBBING IN	VICTORIA SANDWICH
WHISKING	BROWNIES
MELTING	FAIRY CAKES
CREAMING	SWISS ROLL
WHISKING	SCONES

3. Why is it important to pre-heat the oven?

……

……

……

……

4. Why do we sieve flour?

……

……

5. Describe what would happen if the oven were too hot? Too cold?

……

……

Section B: Specific Swiss Roll Questions

1. Why is the tin greased and lined?

……

……

……

2. What stage is reached when the egg and sugar have been whisked sufficiently?

……

……

……

3. Why do some recipes suggest standing the bowl over hot water?

……

……

……

4. Why sieve the flour again?

……

……

……

5. Why ***fold*** in the flour? Why use a ***metal spoon***?

……

……

……

6. Why is it important to prepare everything for rolling the Swiss roll whilst the cake is still baking?

……

……

……

7. Why is it necessary to trim the edges?

……

……

……

8. How does the keeping quality differ from a Victoria Sandwich cake?

……

……

……

……

Exam Paper Section A

Visual stimuli question

Cake making







(a) Identify the method of cake making shown in the images. [1]

……

……

(b) State why the eggs should be added a little at a time. [1]

……

……

……

(c) Describe how and why the flour is “folded” into the mixture when making a sponge cake. [3]

……

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……

……

(d) Accurate weighing and measuring is essential when making cakes. Explain what would happen if too much sugar was used when making a sponge cake. [5]

……

……

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……

……

(e) Suggest **two** ways that labour saving devices can be used when making baked products. [2]

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……

The Nutrient Family Tree:

Draw a nutrition "family tree" page 35 in your exercise books.
Leave space at the bottom for more detail which we will complete at the end of this half term.

THEORY 1: Protein

- As we move through the presentation, fill in notes to your Cornell Notes page.
  - Key words down the left side of the page
    - Descriptions and facts in the middle
      - Summary at the bottom.

Step 3 Reduce

Key Concepts:

- After you have read and taken notes in the left column, summarize the main ideas of the notes into a word or statement.
- Try to use less than 5 words to summarize the each main idea.
- When the topic of the reading changes, write a new "key concept"

Step 2 Record

Notes and Questions:

- As you read, write down important information in your own words. Here are some ideas about what to write down:
  - Important facts or information
  - Phrases that summarize the major ideas – IN YOUR OWN WORDS
  - Define important words
  - Define words that you do not know
- As you read, you should be asking questions. Write down those questions as they come up. Try to make your questions require higher order thinking skills. Here are some ideas for ways to start to higher order questions:
  -
  -
  -
  -

Step 4&5 Recite & Review

- When you are done with your notes, cover up the "Notes and Questions" section. Try to restate the information you wrote down based on the "Key Concepts."
- After you recite, uncover the "Notes and Questions" section, re-read all of the notes, and think about what you have learned.

Step 6 Reflect

Summary:

- Think about everything that you have read/heard. Write a summary of the information. Connect all of the concepts in the reading to each other and to what you are learning in class.

TITLE: **Protein**	DATE:

KEY WORDS:	NOTES:

SUMMARY:

TITLE: **Protein**	DATE:

KEY WORDS:	NOTES:

SUMMARY:

Protein Recall Exercise:

1. What is protein essential for? (3)

……

2. Where do we find it? (3)

……

3. What does the body break down protein into? (1)

……

4. Finish the sentence ‘amino acids are the ……..’ (1)

……

5. How many different types of amino acids are there? (1)

…….

6. Name 2 essential amino acids. (2)

…….. & ……..

7. What does HBV & LBV stand for? Give an example of each. (4)

……

……

……

8. What effects the amount of protein someone needs in their diet? (2)

……

9. How much protein should an adult consume per day? (1)

……g

10. Name 2 consequences of a diet low in protein. (2)

……

……

11. What happens if you have too much protein? (1)

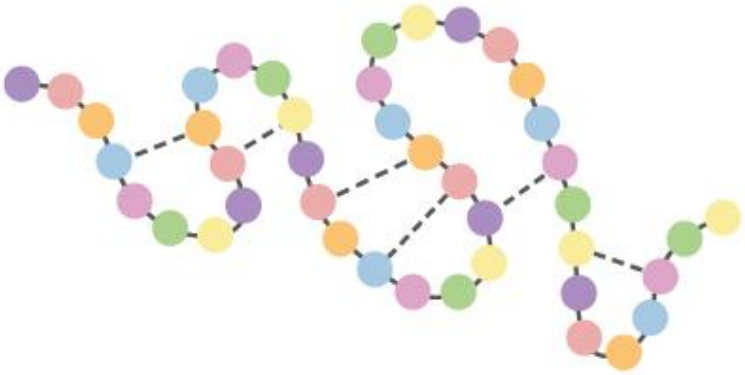
……

12. What is meant by protein complementation? Give an example. (2)

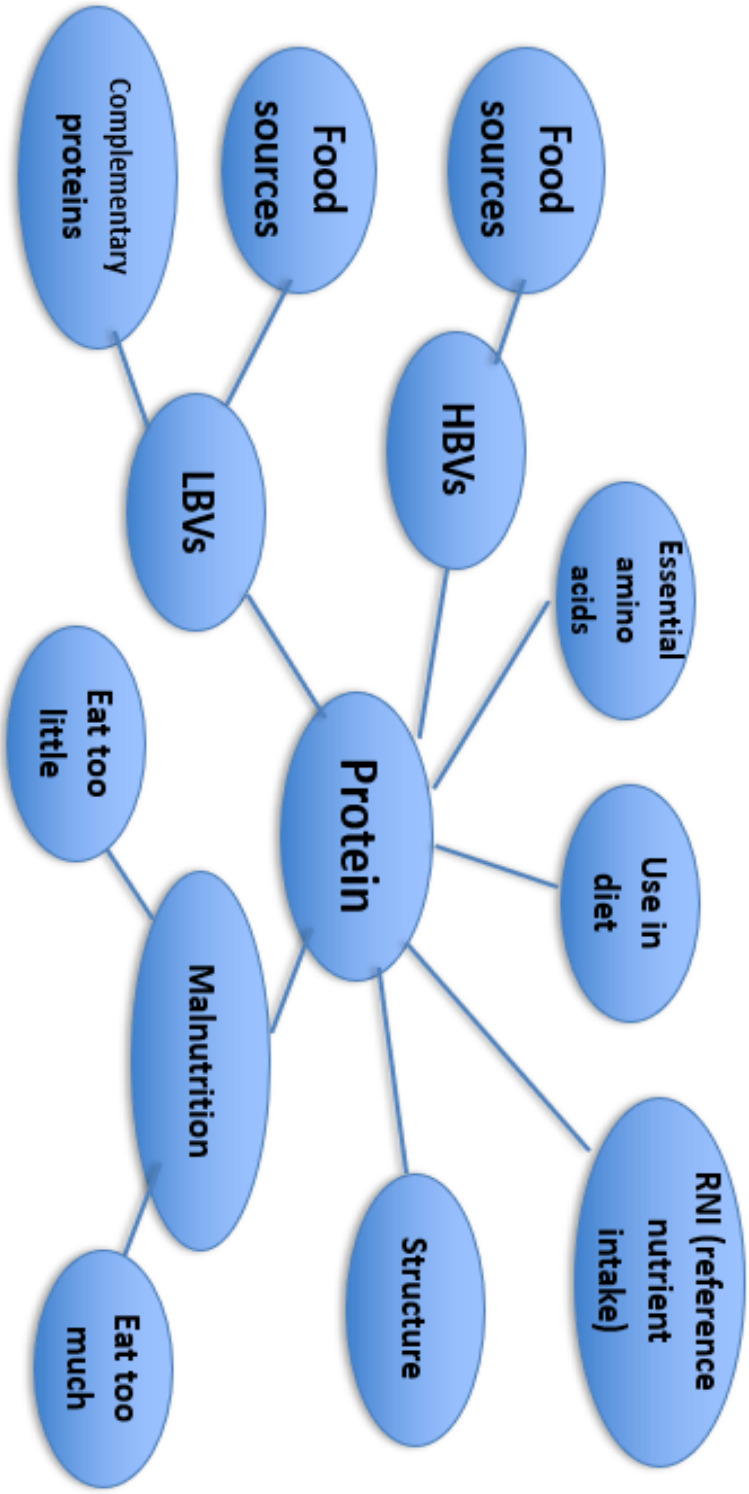
……

……

Scan the following QR code for more information, videos and revision questions!



Extension:


Protein
LBVs
Complementary proteins
Food sources
HBVs
Food sources
Essential amino acids
Use in diet
RNI (reference nutrient intake)
Structure
Malnutrition
Eat too little
Eat too much

Protein

How many sources of protein can you name?
Clue: what protein alternatives to meat can you name?

What is the function of protein in the body?

_____

_____

What are the symptoms of protein deficiency?

_____

_____

_____

_____

What are the main types of meat eaten in the UK?

_____

_____

Name 3 types of poultry:

1. _____
2. _____
3. _____

Why is fish an important food in the diet?

_____

_____

Low Biological Value and High Biological Value Proteins

Which of the following have High Biological Value? Tick the correct options from the ones given.

Eggs	Shellfish	Quorn
Quinoa	Milk	Peas
Meat	Soya Beans	Pulses

Which of the following are plant-based proteins that have Low Biological Value? Tick the correct options.

Quorn	Soya Beans	Cereals	Beans
Quinoa	Pulses	Rice	

Why should you eat a variety of low biological protein foods together?

_____

_____

Explain why the following have a high requirement for protein:

a) Children
b) Pregnant women
c) Adolescents

_____

_____

_____

_____

Eggs

Most of the eggs we eat come from hens but eggs from other birds such as geese and ducks are also widely available.

Egg consumption in the UK is estimated at 170 eggs per year per person.

Complete the table showing example dishes for how eggs can be used:

Use	Definition	Examples
Binding		
Aerating		
Enriching		
Emulsifying		
Colouring		
Garnish		
Glazing		
Thickening		

Storage of Eggs

List important factors to consider when storing eggs:

Egg Freshness

There are two ways to test the freshness of an egg. Illustrate them below.

1. Place the egg into a glass bowl full of cold water. Freshly laid eggs will sink to the bottom. Eggs which are approximately a week old will float slightly but still be useable. Eggs which are more than two weeks old may float. If so they should not be used.

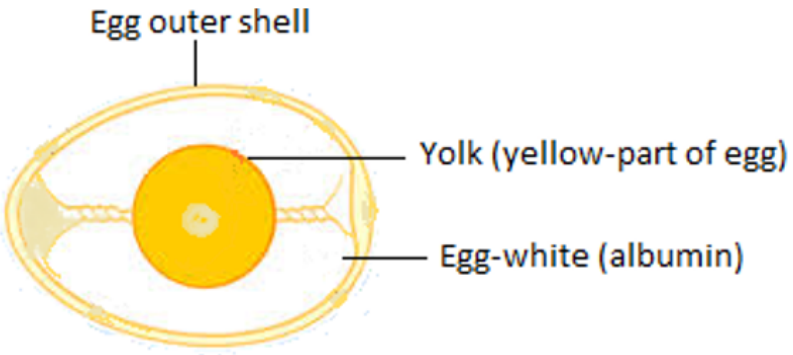
2. Break the egg onto a plate. In a fresh egg, the yolk sits up high and the white is thick and closely surrounding the yolk. An older egg has a flat yolk that breaks easily, and a thin, watery white.

Eggs

Eggs contain most of the nutrients needed by the body. They are an excellent source of protein.

Egg Structure

An egg is made up of three main parts: shell, white and yolk.
Complete the image below labelling all the key parts, with a definition.
CHALAZE, VITELLINE MEMBRANE, EGG CELL (GERMINAL DISC), SHELL MEMBRANES, SHELL, AIR CELL



Cooking Methods

Eggs can be used of their own and cooked by the following methods:

Method	Definition	Examples
Baking		
Frying		
Boiling		
Poaching		
Scrambling		

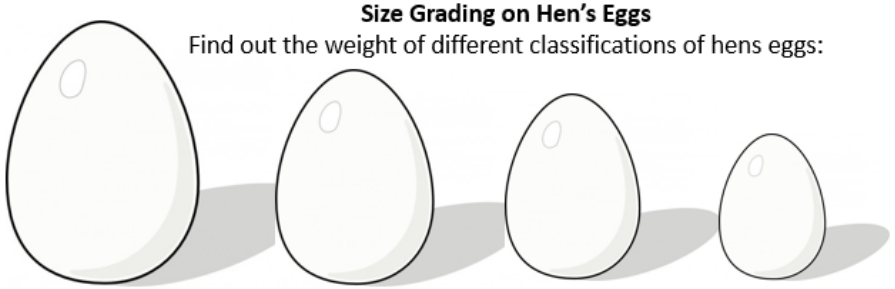
Egg Farming

Complete the table with a brief description about the different types of egg readily available to purchase in the UK.

Barn	Battery (Laying Cage)
Free Range	Organic

Size Grading on Hen's Eggs

Find out the weight of different classifications of hens eggs:



THEORY 2: FATS

- As we move through the presentation, fill in notes to your Cornell Notes page.
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    - Descriptions and facts in the middle
      - Summary at the bottom.

Step 3 Reduce

Key Concepts:

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  -
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Step 6 Reflect

Summary:

- Think about everything that you have read/heard. Write a summary of the information. Connect all of the concepts in the reading to each other and to what you are learning in class.

TITLE: **Fats**	DATE:

KEY WORDS:

NOTES:

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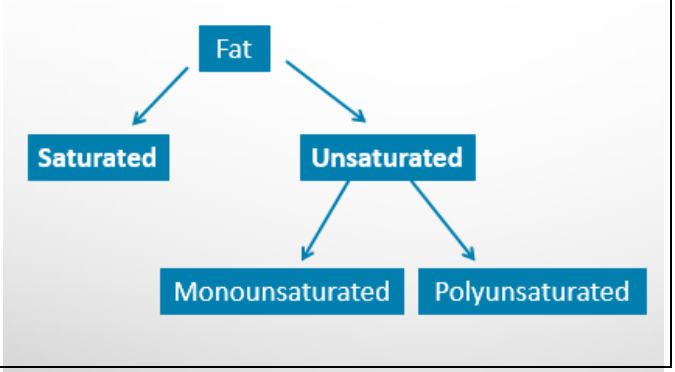
SUMMARY:



TITLE: **Fats**	DATE:

KEY WORDS:	NOTES:

SUMMARY:

Fat Recall Exercise:

1. Name 4 reasons you need fat in your diet (4)

……

……

……

2. Name 2 consequences of a diet high in fat (2)

……

……

……

3. Name 2 consequences of a diet low in fat (2)

……

……

……

4. What fraction of our energy come from fat? (1)

……..

5. Name the 2 types of unsaturated fats (2)

……

6. Name 2 saturated fats (2)

……

7. Name 2 unsaturated fats (2)

……

8. What is cholesterol? (1)

……

9. What does LDL & HDL stand for? What are they?

……

……

……

10. Which is better for you, HDL or LDL? (1)

……

11. What is atherosclerosis?

……

……

12. What are Trans fats? (1)

……

……

13. Why might companies use trans fats? (1)

……

14. Name a health benefit of consuming Omega 3?

……

15. Where can you find Omega 6? (1)

…….

16. What type of fat is Omega 3 and Omega 6? (1)

…….

17. What is meant by visible and invisible fats? Give an example for both. (4)

…….

…….

…….

18. What are sterols and stanols and what health benefits do they have? (2)

…….

…….

…….

Scan the following QR code for more information, videos and revision questions!

Fat
Cholesterol
HDL
LDL
Fatty Acids
Omega 6
Omega 3
Good Fats
Unsaturated
Monounsaturated
Sources
Polyunsaturated
Sources
Types
Saturated
Animal Sources
Vegetable sources
Trans fats
Bad Fats
RNI (reference nutrient intake)
Use in diet
Malnutrition
Eat too much
Eat too little
Stanols and sterols

Fats and Oils

Fat is a good source of energy and a source of the essential fatty acids that the body can't make itself, and fat helps the body absorb some vitamins. All fat is high in calories, so if you are watching your weight, you should limit your fat intake. The total amount of fat you eat should make up no more than 30% of your calories from food.

Functions of Fat in the Body

Choose the correct words from the options given to describe the four functions of fat in the body.

warm **provide** **soluble** **protect**

a) To _____ energy
b) To _____ the internal organs
c) To keep us _____
d) To provide fat _____ vitamins A and D

What is the difference between saturated and unsaturated fat?

_____
_____
_____

Why should you eat a low amount of saturated fat?

_____
_____
_____

Which of the following contain saturated fat? Select the correct options from the ones given.

Sausages	Cream	Coconut and Palm Oil	Avocado
Oily Fish	Sunflower Oil	Walnut Oil	Hard Cheese e.g. Cheddar

Sources of Fats and Oils

Choose the correct words from the options given to complete the following sentences.

fridge **obese** **room** **liquid** **solidify** **needed** **solid**

a) Fat is _____ at room temperature
b) Oil is _____ at room temperature
c) Fat should be stored in the _____ to prevent it melting
d) Oil should be stored at _____ temperature
e) Oils _____ in cold temperatures
f) Some fat is _____ by the body
g) Too much fat can cause you to become overweigh or _____

Which of the following are liquid at room temperature? Select the correct options from the ones given.

Butter	Cream	Rapeseed Oil	Suet
Olive Oil	Sunflower Oil	Dripping	Lard

Why is there a demand for low or reduced fat foods?

_____
_____

When choosing food, how can packaging help people make a healthy choice?

_____
_____
_____

Types of Fat and Oils

There are many types of fat and oil.

A general rule is that fats are solid or semi-solid at room temperature (18°C). Oils are liquid at room temperature. A small number of fats from plant sources are naturally solid or semi-solid at room temperature.

Type	Uses	Composition / Made From
Olive Oil		
Sunflower Oil		
Vegetable Oil		
Spread		
Margarine		
Butter and Ghee		
Lard		
Suet		

THEORY 3: Carbohydrates

- As we move through the presentation, fill in notes to your Cornell Notes page.
  - Key words down the left side of the page
    - Descriptions and facts in the middle
      - Summary at the bottom.

Step 3 Reduce

Key Concepts:

- After you have read and taken notes in the left column, summarize the main ideas of the notes into a word or statement.
- Try to use less than 5 words to summarize the each main idea.
- When the topic of the reading changes, write a new "key concept"

Step 2 Record

Notes and Questions:

- As you read, write down important information in your own words. Here are some ideas about what to write down:
  - Important facts or information
  - Phrases that summarize the major ideas – IN YOUR OWN WORDS
  - Define important words
  - Define words that you do not know
- As you read, you should be asking questions. Write down those questions as they come up. Try to make your questions require higher order thinking skills. Here are some ideas for ways to start to higher order questions:
  -
  -
  -
  -

Step 4&5 Recite & Review

- When you are done with your notes, cover up the "Notes and Questions" section. Try to restate the information you wrote down based on the "Key Concepts."
- After you recite, uncover the "Notes and Questions" section, re-read all of the notes, and think about what you have learned.

Step 6 Reflect

Summary:

- Think about everything that you have read/heard. Write a summary of the information. Connect all of the concepts in the reading to each other and to what you are learning in class.

TITLE: **Carbohydrates**	DATE:

KEY WORDS:

NOTES:

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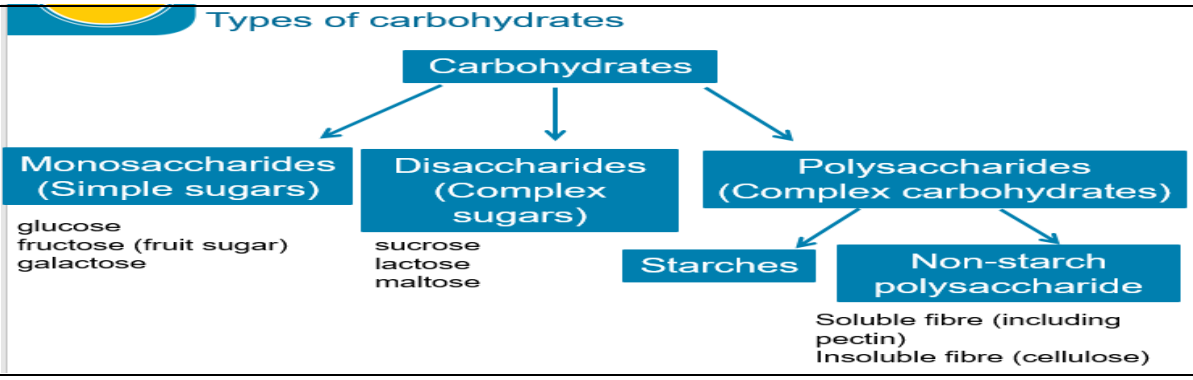
SUMMARY:



TITLE: **Carbohydrates**	DATE:

KEY WORDS:	NOTES:

SUMMARY:

Carbohydrates Recap Questions

1. Why do we need carbohydrates in our diet? (1)

……

2. What does the body break carbohydrates down into? (1)

……

3. Which part of the body produces insulin, which allows the carbohydrate to enter cells, which is used in respiration? (1)

……

4. Name a monosaccharide (1)

…….

5. What does NSP stand for? (1)

……

6. Sucrose, Lactose and Maltose are all what? (1)

……..

7. Name the 2 types of carbohydrates (2)

……

8. Which gives you a fast release? (1)

……

9. Is starch soluble or insoluble? (1)

……

10. As well as providing energy, name 2 other nutrients that starchy foods normally supply? (2)

……

11. Give 2 examples of what happens if you have too few carbohydrates? (2)

……

……

12. Give 2 examples of what happens if you have too many carbohydrates? (2)

……

……

13. What 3 elements make up the composition of carbohydrates? (3)

……

14. What are intrinsic sugars? (1)

……

15. How much sugar should you not exceed in a day? (1)

……..g

16. What is meant by empty calories? (1)

……

17. What is meant by hidden sugars? (1)

……

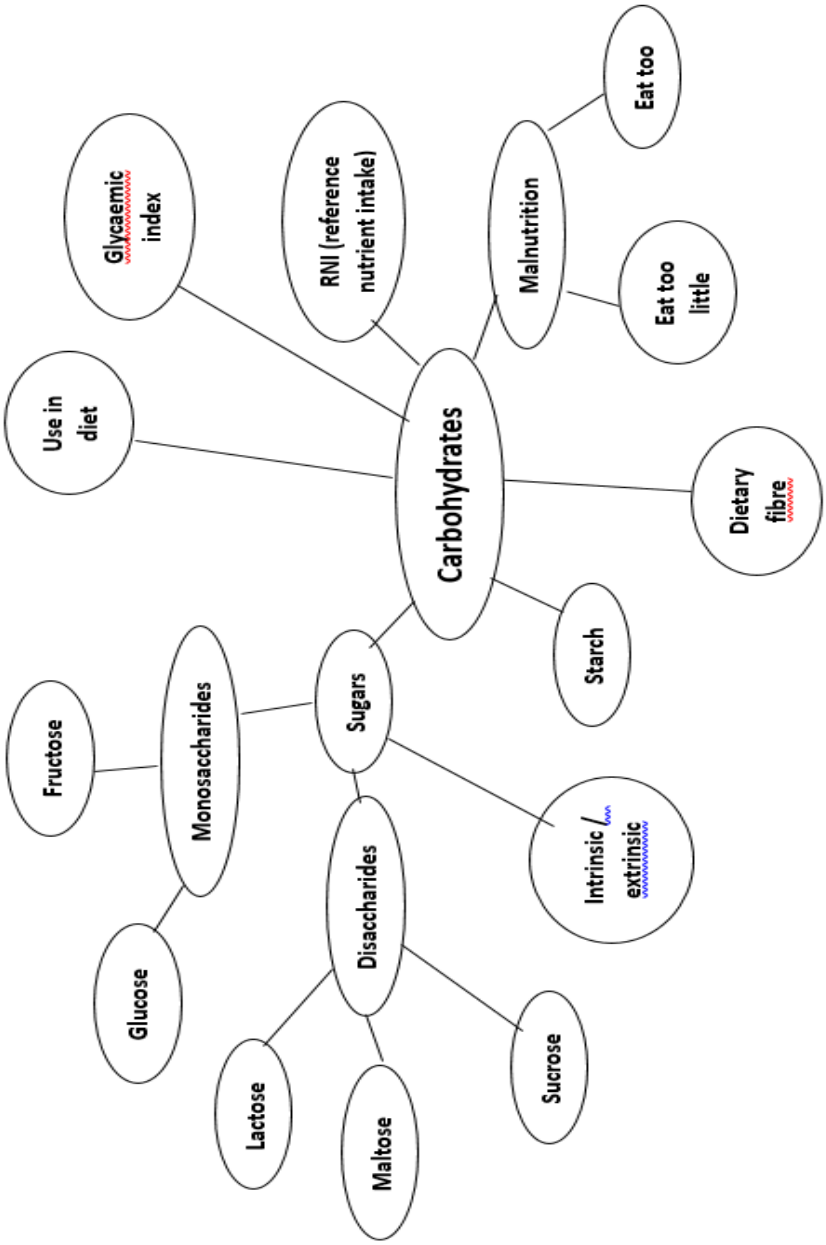
18. What is the glycemic index? (1)

……

……

Scan the following QR code for more information, videos and revision questions!

Extension Tasks:



Carbohydrates

Carbohydrates are a source of energy. Foods rich in carbohydrates include bread, pasta, rice and breakfast cereals, as well as sugar. Simple carbohydrates are known as *sugars* and this energy is released quickly. Complex carbohydrates are starchy foods such as bananas, chickpeas, nuts, potatoes and wholegrain cereals. These foods release energy slowly as they are digested, which makes your energy levels more stable. For a healthy diet, eat more of the complex carbohydrate foods.

List the main sources of carbohydrate in your diet:

Think about what you ate yesterday.

Why does the body require carbohydrate?

_____

_____

Why are wholemeal cereals nutritionally preferable to refined (white) ones?

_____

_____

What happens if too much carbohydrate is eaten?

_____

_____

Why do athletes eat starchy foods such as pasta before an event?

_____

_____

A Spoonful of Sugar…

Mindmap below some of the problems people might face if they have too much sugar in their diets:

As a society, do you think people eat too much sugar?

_____

_____

_____

_____

Why is sugar added to so many foods?

_____

_____

_____

By looking at foods which contain sugar, can you explain why we, as a nation, are becoming obese?

_____

_____

_____

Sugar V Starch

Sugar and starch are both carbohydrates.

Sugary foods are simple carbohydrates that release energy quickly; they can cause uneven blood sugar levels.

Starchy foods are complex carbohydrates that provide slow release energy. Starch-based foods should be consumed as a source of energy, not sugary foods.

Complete the table below with examples of types of sugars and starches.

Sugar		**Starch**
Monosaccharides Glucose absorbed directly into the bloodstream during digestion	**Disaccharides** Formed when two monosaccharide molecules are joined	**Polysaccharides** Starch is a complex carbohydrate
Glucose	**Sucrose (Glucose+Fructose)**	**Starch**
Fructose	**Lactose (Glucose+Galactose)**	**Cellulose**
Galactose	**Maltose (Glucose+Glucose)**	**Pectin**

What is the difference between **intrinsic** and **extrinsic** sugars? _____

_____

Hidden Sugar

Sugar is often described as having **empty calories**, meaning that it adds no nutrients to the diet. Yet in the UK the average person eats 38kg of sugar a year. **Hidden sugar** can be found in readymade foods such as bread, soups, sauces, fruit-flavoured yogurts and breakfast cereals. Hidden sugars are ingredients that are present in food and drink but may not be recognised as sugar because they do not taste sweet. Even so, they can contribute to excess calories and can cause tooth decay.

If you read the nutritional labels on food packaging you will see how much sugar there is in any food product. Remember that there are different names for 'sugar' such as glucose syrup, corn syrup or sucrose.

Rethink your Drink

Match the drink to the sugar content per 100ml:

Coca Cola – Juicy Water – Monster Ripper – Innocent Smoothie – Lucozade – Coconut Water – Vitamin Water – Strawberry Volvic Water

3g	4.8g	5g	6.8g
8.3g	8.4g	10g	10.6g

On average, how often do you drink sugary drinks?
Sugary drinks include juices (including 100% fruit juice), soda, sports drinks, energy drinks, lemonade, and sweetened coffee or tea drinks.

__ Only at special events __ Daily __ Once a week __ 3 times a week

What is a realistic goal for how many sugary drinks, including 100% juice; you could limit yourself to each day?

_____

_____

_____

Tips to Reduce Sugar Intake

List 10 ways to reduce sugar intake in the diet:

1. _____
2. _____
3. _____
4. _____
5. _____
6. _____
7. _____
8. _____
9. _____
10. _____

TITLE: **Micronutrients**	DATE:

KEY WORDS:	NOTES:

SUMMARY:

THEORY 4: Micronutrients

Vitamins and Minerals

You have seen the claims on drinks and breakfast cereals: 'Rich in vitamin C'; 'Good source of calcium'.
Vitamins and minerals are essential for our health.

Vitamins and minerals are called **micronutrients** which means they are needed in smaller quantities than the macronutrients. If you eat a variety of foods and a balanced diet you will get most of the nutrients you need.

Vitamins

There are two groups of vitamins: fat-soluble and water-soluble.

The fat-soluble vitamins – A, D, E, and K – dissolve in fat and are stored in your liver.

The water-soluble vitamins – C and the B-complex vitamins – dissolve in water so that your body can absorb them. Your body can't store these vitamins and any vitamin C or B that your body doesn't use is passed out in your urine. You need a supply of these vitamins every day.

Minerals

Minerals are found in the soil and water, and pass into plants and animals that we eat for food.
Your body needs small amounts of minerals to grow and stay healthy.

Minerals are necessary for three main reasons:

- Building strong bones and teeth
- Controlling body fluids
- Turning food into energy

You need to know:

Vitamins	Minerals	Trace Elements
A – C – D – E – K B Group: B1 Thiamin B2 Riboflavin B3 Niacin B5 Pantothenic Acid B6 Pyridoxine B7 Biotin B9 Folic Acid B12 Cobalamin	Calcium Iron Potassium Phosphorous Magnesium Sodium	Iodine Fluoride Selenium Zinc

MINERALS				TRACE ELEMENTS	
CALCIUM	**IRON**	**POTASSIUM**	**MAGNESIUM**	**IODINE**	**FLOURINE**
FOOD SOURCES					
FUNCTIONS					
MALNUTRITION - EFFECTS OF DEFICIENCY					
MALNUTRITION - EFFECTS OF EXCESS					
DIETARY REFERENCE VALUE (include the units)					

VITAMINS							
WATER SOLUBLE		FAT SOLUBLE					
Vitamin B	Vitamin C	Vitamin A	Vitamin D	Vitamin E	Vitamin K		
FOOD SOURCES							
FUNCTIONS							
MALNUTRITION - EFFECTS OF DEFICIENCY							
MALNUTRITION - EFFECTS OF EXCESS							
DIETARY REFERENCE VALUE (include the units)							

WEEK ONE: Retrieval Exercise

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Extended Revision Question

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WEEK TWO: Retrieval Exercise

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Extended Revision Question

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WEEK THREE: Retrieval Exercise

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Extended Revision Question

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WEEK FOUR: Retrieval Exercise

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Extended Revision Question

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USING THE NUTRITION PROGRAM

We can use an online tool, the Nutrition Program by Jenny Ridgewell, to analyse the nutritional content of our food. Nutritional analysis allows us to look at all the nutrients in a dish and helps us to make healthy choices about the food we eat.

Instructions

- Log onto your computer and go to the website www.nutritionprogram.co.uk
- Login using your personal login (on the front of this workbook).
- Go to Create a new Recipe
- Enter the name of the dish
- Enter the number of portions the recipe made in the portions box and click OK

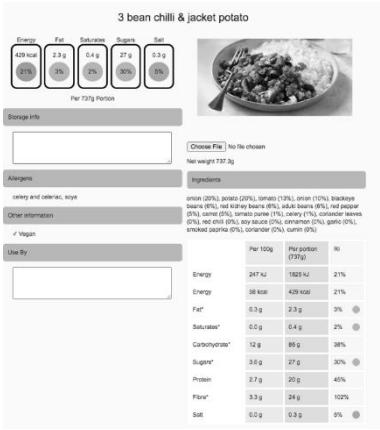
To analyse the nutritional content of a dish:

- Type the name of the first ingredient into the "*Find Ingredient*" box, select the ingredient which best matches the description and click .
- Next, enter the weight in grams of the ingredient (there may be some hints to help you) and hit return.
- Do this for all the ingredients.

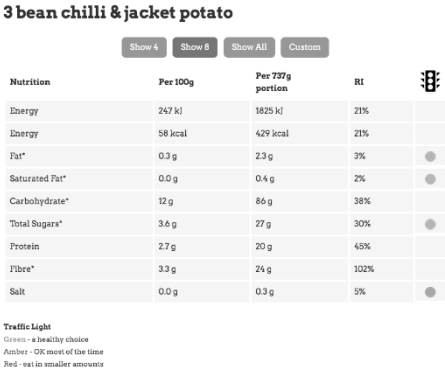
You can then use the different tabs to:

1. Change the ingredients,
2. Calculate the cost of the dish,
3. Look at the nutritional content of the dish,
4. Design and print a food label for the dish, and
5. Design and print a recipe sheet for the dish.

Food label



The dish nutritional content



Core Knowledge Test Scores:

Test Number	Score	Out of

Eatwell Guide

Use the Eatwell Guide to help you get a balance of healthier and more sustainable food. It shows how much of what you eat overall should come from each food group.

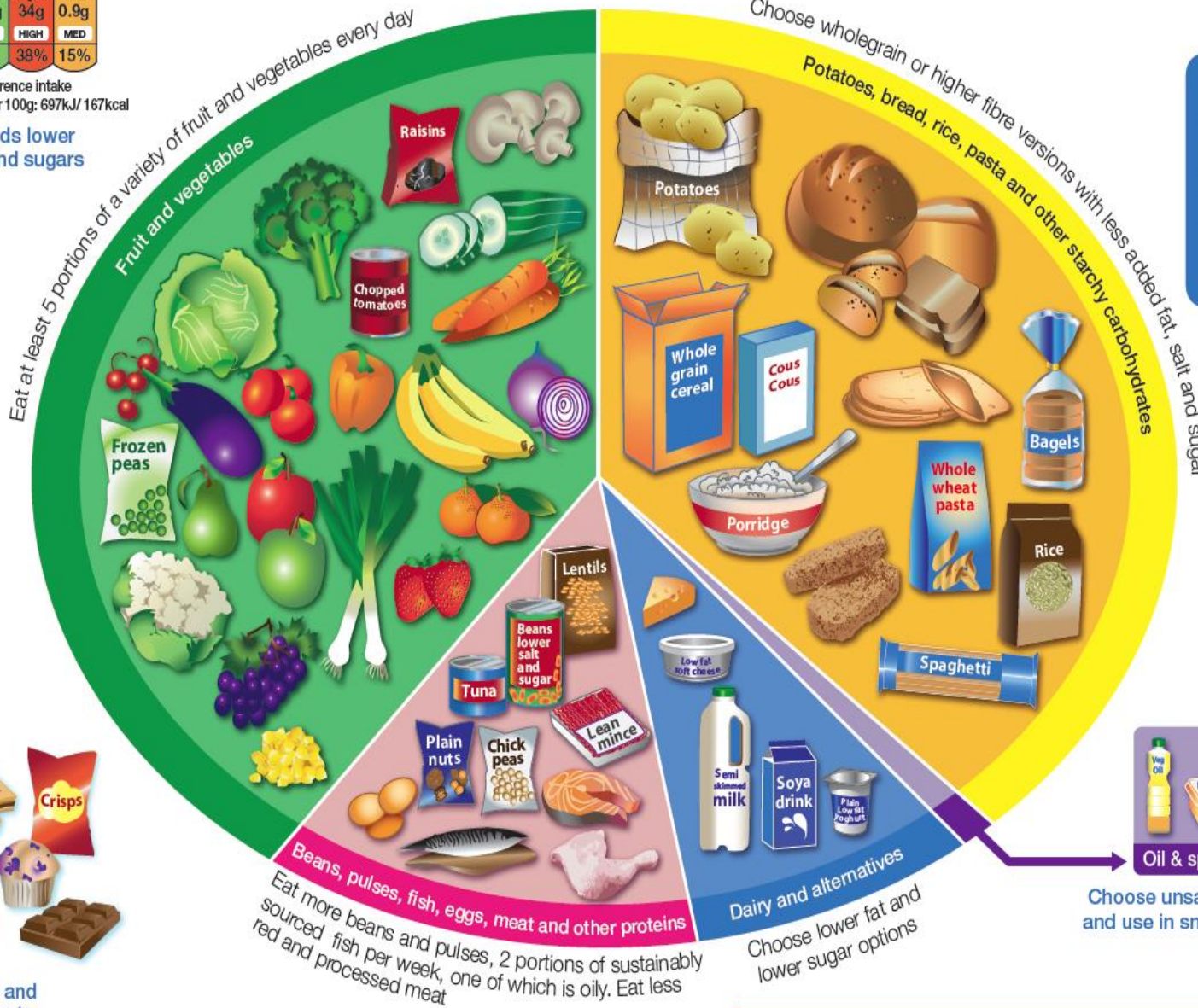
Check the label on packaged foods

Each serving (150g) contains

Energy	Fat	Saturates	Sugars	Salt
1046kJ 250kcal	3.0g	1.3g	34g	0.9g
	LOW	LOW	HIGH	MED
13%	4%	7%	38%	15%

of an adult's reference intake
Typical values (as sold) per 100g: 697kJ/ 167kcal

Choose foods lower in fat, salt and sugars



Water, lower fat milk, sugar-free drinks including tea and coffee all count.

Limit fruit juice and/or smoothies to a total of 150ml a day.

Choose unsaturated oils and use in small amounts

Eat less often and in small amounts

Per day 2000kcal 2500kcal = ALL FOOD + ALL DRINKS