



Knowledge Organiser

Food Preparation & Nutrition

GCSE Food Preparation and Nutrition WJEC

YEAR 10 & 11

2023-2025

Food Preparation and Nutrition

GCSE WJEC

NAME: _____

TUTOR GROUP: _____

1	Bread	What flour is typically used in bread making? Why?	Strong flour/bread flour – due to the gluten content.
2		What happens when the yeast ferments?	During the fermentation process carbon dioxide is produced, which causes the dough to rise.
3		Why is salt is an essential ingredient in bread making?	It helps to strengthen the gluten and helps the yeast during fermentation and is therefore important for good volume and texture.
4		What is the most popular grain used for bread making in the UK for years?	Wheat.
5		What is the purpose of kneading the dough?	To give the stretchy and elastic consistency and strengthen the gluten strands.
11	Fruit & Vegetables	How can you buy fruit & vegetables?	Fresh, frozen, canned, juiced and dried.
12		Eating the skin of fruit and vegetables is a good source of what?	Fibre.
13		Name 3 fruits with stones.	Peach, plum, nectarine, apricot, cherry, mango, greengage,
14		Why is it important to eat green leafy vegetables when they are as fresh as possible?	To ensure you get maximum nutritional value as they quickly lose vitamin C.
15		Explain enzymic browning.	Enzymic browning is a chemical process which occurs in some fruits and vegetables. It causes them to discolour, usually turning a brown colour. The enzyme polyphenol oxidase then reacts with the oxygen in the air and as a result the fruit & vegetables will turn brown.
21	Cereals & Sauces	List the nutritional composition of cereals.	Fibre, carbohydrates, Low Biological Value (LBV) protein, B vitamins, Vitamin E, fat and iron.
22		How should you store cereals?	In a cool dry place in an airtight container.
23		What cereals are grown in the UK? How are they eaten?	Wheat, barley, oats and rye – these are mostly processed into other foods before we eat them.
24		What is white flour in the UK fortified with? Why?	Iron, calcium, B vitamins Thiamine and Niacin – they are lost during the processing of wheat into flour.
25		List three different types of rice.	Long grain, basmati, arborio, wild, paella, short grain, pudding, easy cook, brown, jasmine.
26	Provenance & Processing	'Food provenance' means? Traceability refers to?	Where your food originates from, therefore where is it caught, grown, or reared. The ability to trace the movement of a food or feed item through specified stages of production, processing and distribution.
27		Describe the meaning of Food processing.	This refers to the stages by which raw ingredients are turned into food and made suitable for consumption.
28		Why is food processed?	Make it safe to eat. Preserve it and slow down spoilage. Maintain its consistency. Add variety to the diet. Make it enjoyable to eat. Make it easier to prepare and serve. Make it available out of season. Reduce time spent on meal preparation at home.

29		Explain primary processing.	When foods are processed straight after harvest or slaughter, to get them ready to be used in other food products such as wheat grain (seeds) turned into flour.
30		Explain secondary processing.	Primary processed foods are either used on their own or mixed with other foods and turned into other food products, such as wheat flour turned into bread or pasta – this is secondary processing.
31		Food miles can be reduced by buying locally and selecting seasonal produce .	Sustainability.
32	Food Miles	Greenhouse gas emissions produced by growing, rearing, farming, processing, transporting, storing, cooking and disposing of the food you eat.	Carbon footprint.
33		The demand for food is consistent all year round therefore food is sourced from all around the world.	Consumer demand.
34		Concern for our environment continues to grow and as the biggest contributor to greenhouse gasses is the production of CO ₂ from carbon emissions.	Food transportation.
35		Distance from field to fork.	Food miles.
41	Chicken	Give three examples of poultry.	Chicken, turkey, duck, goose, guinea fowl, pheasant and pigeon.
42		What core temperature does chicken need to reach to ensure it is cooked?	75°C
43		Breast meat is softer, and leg meat can be tough – why?	The amount of movement.
44		Nutritional content of chicken.	Nutritional value depends on type, age, how its reared and what part eaten. HBV, lean meat, good source of B vitamins, provide vitamin A and D.
45		Chicken is very versatile, what does this mean?	You can do lots of things with it – grill, fry, roast, steam, curries, stews, salads etc.
46	Eggs	What does the lion mark represent?	The Lion Quality Mark shows that eggs have been produced to the highest food safety standards. Hens are tested for salmonella and hygiene is strictly controlled.
47		What nutrients do eggs contain?	Protein, vitamins, A, D, E, K and B groups, iron, phosphorus and zinc.
48		Describe three functions of eggs within cookery.	Garnish, thickening, aerating, emulsifying, enriching, coagulation, binding, glazing, coating, trapping air, emulsification.
49		Why should eggs be cooked properly for persons in the vulnerable group?	To avoid the risk of food poisoning and salmonella.
50		What happens to the air cell in an egg as it ages?	It gets bigger.
51	Meat	What is meat made up of? The natural red colour of meat comes from what?	Muscle, connective tissue and fat and this determines the flavour, texture and culinary purpose. Myoglobin
52		Why do tender cuts need minimal cooking?	To retain moisture
53		List three reasons for cooking meat.	Make it delicious/appetising to eat. Make it tender. Make it easier to digest. Make it safe to eat, i.e. kill any harmful bacteria.

54		What are the edible internal organs of animals known as?	Offal.
55		Explain Halal.	Islamic law states that to be classed as halal - the neck has to be slit by a razor-sharp knife in a single swipe, thus incurring the least pain possible for the animal then all the blood must be drained from the carcass, as blood is forbidden.
56	Soya & Tofu	What is soya?	Soya bean plants – legumes (beans, peas & lentils.)
57		What is tofu?	Curdled soya milk – pressed into block & cooled.
58		What is the nutritional value of soya and tofu?	Soya - HBV, calcium, fibre and magnesium. Tofu - HBV, iron, calcium, B vitamins.
59		Name two soya products.	Soya milk, soy sauce, miso, soya flour, tempeh (similar to veggie burger.)
60		Why are plant-based diets better for the environment?	The amount of resources (land, water, food) and emissions (greenhouse gases) required to raise animals for milk production or slaughter far outweighs that which is required to raise plant-based sources of protein.
61	Food Security	What does food security mean?	Where people have access to the food they need, this applies to a person/community/country/world.
62		What factors affect food security?	Climate, insufficient land, farmland used for industrial crops (biofuels) fuels from plant materials, wealth, income, rising population.
63		With global demand for food increasing, we need to increase food supplies – how can this be done?	New technologies – GM crops – (pest resistant – higher nutritional values – higher yields.)
64		What is Fairtrade?	The foundation aims to make it fairer for farmers to get a decent price and improved working conditions. The farmers are then food secure and have more money for food and their families.
65		What are the most common causes of food shortages in the world?	Poverty and drought. Currently, a typical cocoa farmer in Cote d'Ivoire lives on around 74p a day. Almost all cocoa farmers in West Africa live in poverty. Smallholder coffee farmers in three Central American countries were found to have no guarantee of food security for 3-4 months every year.
66	Fish	What are the three main types of fish?	White fish, oily fish and shellfish.
67		How can fish be bought?	Fresh, frozen, smoked, canned or dried.
68		Explain the nutritional value of fish.	Fish contains HBV protein, essential fatty acids (in oily fish), a good source of vitamins A for eyesight & D to aid the absorption of calcium. Fish is low in fat contains Omega 3 however shellfish may contain high levels of cholesterol.
69		What colour chopping board should fish be prepared on?	Blue.
70		What is Omega 3?	A Fatty acid. Has anti-inflammatory properties (good for achy joints.) Helps reduce the risk of heart disease. Helps the development of brain tissue and nerve growth.

71	Carbohydrates	What are simple carbohydrates?	Monosaccharides or disaccharides, they are natural sugars and are easily broken down by the body for energy. Glucose, fructose, lactose, sucrose.
72		Define complex carbohydrates.	These are polysaccharides which are large molecules that take a long time to digest. Starch and fibre NSP.
73		Starchy carbohydrates provide the body with what?	Slow release energy. (Bread, rice, pasta, potatoes, cous cous.)
74		Low carbohydrate diets, like the Atkins Diet, can be very bad for your health – why?.	While they can help you lose weight, it will have a negative effect on your central nervous system. It will also force your body to use protein for energy, resulting in lost muscle mass.
75		Name three healthy sources of carbohydrates.	Vegetables, fruits, beans and whole grains.
76	Vitamins & Minerals	Name the two groups of vitamins.	Fat Soluble vitamins (vitamins that are found in foods containing fat) and Water soluble vitamins (Vitamins that are found in foods with a high water content).
77		What are micronutrients?	Vitamins and minerals are needed by our bodies in small amounts every day for a variety of different jobs. This is why they are micronutrients.
78		Why are minerals important?	Minerals help to make strong bones and teeth, make sure we have sufficient blood cells to transport oxygen around the body, control the amount of water in our body and make the nerves and muscles work correctly.
79		What are the fat soluble vitamins? What are the water soluble vitamins?	A,D,E & K C & B vitamins.
80		Explain with reasons and examples how you would minimise the loss of vitamins from food as you prepare, cook and serve.	Using quick cooking methods where nutrients are retained, avoid boiling where nutrients are lost in the water, eat vegetables raw or steamed to reduce nutrient loss, avoid using oils. Grill meat to help with fat loss. E.g. stir frying is a healthy method of cooking which is trendy too. Reduce the cooking time of red meat to ensure it is succulent and goodness is not cooked off.
81	Protein	What are amino acids?	The building blocks in protein, give bodily cells their structure and help transport and store nutrients.
82		Explain LBV & HBV with examples.	LBV protein contains some of the essential amino acids – grains, seeds, pulses, nuts. HBV protein contains all the essential amino acids – meat, fish, poultry, eggs, dairy.
83		What chemical change takes place when proteins are heated?	Denaturation is the change in structure of protein molecules. Coagulation follows denaturation (for example, when egg white is cooked it changes colour and becomes firmer or sets.)
84		Define complimentary proteins.	Complementary proteins mix HBV's and LBV's or combine LBV foods to supply all the essential amino acids the body needs.
85		Describe the Maillard reaction.	The Maillard reaction is a chemical reaction between amino acids and reducing sugars (carbs or natural sugars) that gives browned food its distinctive flavour.

86	Fats	The general term for fats and oils is lipids. Saturated fat – Unsaturated fat	Fats are usually solid at room temperature oils are liquid at room temperature.
87		List the function of fat.	Energy source, insulates the body, protects our vital organs, good source of vitamin D, E & K, gives food texture and flavour, helps fill us up.
88		Describe ways in which someone can reduce their fat intake.	Different cooking methods ie grilling instead of frying, cutting off visible fat, choosing foods that are lower fat options ie leaner meats.
89		Fats have important properties/functions.	Trap air (aeration) when beaten with sugar. Add colour and flavour to foods. Retain moisture in a baked mixture such as a cake (extending shelf life.) Have shortening properties that help pastry stay crumbly in texture (i.e. short.) Act in an emulsion (e.g. mayonnaise.) Help transfer heat when frying and deep frying.
90		Identify two visible fats and two invisible fats.	Butter, lard, suet, fat on meat, olive oil, nuts, oily fish, seeds, oils.... Biscuits, ice cream, sweets, ready meals.
91	Macro/Micronutrients	What are the two main nutrient groups?	Macronutrients & micronutrients.
92		Why are macronutrients needed?	For energy.
93		Why do we need micronutrients?	They are needed in the body in tiny amounts. They do not provide energy but are required for a number of important processes in the body.
94		Vitamins are split into two groups.	Fat soluble (A,D,E,K) and water soluble (B vitamins & C) which cannot be stored in the body and are therefore required daily.
95		List the B vitamins, name them and give functions.	Vitamin B₁ (Thiamin) supports the release of energy from carbohydrate. Vitamin B₂ (Riboflavin) supports the release of energy from protein, carbohydrate and fat. Vitamin B₃ (Niacin) supports the normal functioning of the nervous system. Vitamin B₆ (Pyridoxine) supports normal energy-yielding metabolism. Vitamin B₉ Folate/Folic Acid supports production of normal red blood cells, normal cell division, normal psychological function. Vitamin B₁₂ (Cyanocobalamin) supports the production of energy, formation of red blood cells, normal function of the immune system and nervous system.
96	Nutritional Values	Energy balance equals?	Food input equals energy output.
97		The way nutrients work together is called?	Complementary action – for example: Vitamin D helps the absorption of Calcium. Vitamin C helps with Iron absorption. Vitamin B12 and Folic Acid work together with cell division and replication during foetal development.
98		Iron deficiency is called?	Anaemia. Teenage girls and women of childbearing age need more iron than males of the same age.

			More than 2 billion people worldwide suffer from iron deficiency anaemia, making it the most common nutritional deficiency.
99		A diet lacking in vitamin D can cause?	Rickets in children.
100		Vitamin K is important – why?	It supports normal blood clotting and the maintenance of normal bones. Sources of vitamin K include green leafy vegetables, meat, dairy products and eggs. Deficiency of vitamin K is considered to be very rare as it is widely available in the diet and produced to some extent in the gut by bacteria.
101	Dietary Needs	There are two types of iron; one from animal sources (haem iron) and the other from plant sources – give examples of each.	Meat and fish. Green leafy vegetables, cereals, legumes, lentils, beans, pulses, nuts and eggs.
102		If calcium intake is too low what can happen?	A poor supply of dietary calcium can lead to low bone density. Over time, this will lead to osteoporosis, characterised by weak, brittle bones. This condition may also reflect a lack of vitamin D, which is involved in calcium absorption.
103		Children have a higher energy requirement for their body size compared to adults because they are growing rapidly and are often very active so what do they need to be eating?	A nutrient-dense diet providing adequate energy and nutrients, which includes healthy snacks, is essential for growth and development. It is also important for children to have sufficient to drink. Young children also have small stomachs, so they need to eat small and frequent meals.
104		Adolescence is a period of rapid growth and development and is when puberty occurs. The demand for energy and most nutrients are relatively high, which nutrients are required most in boys and girls?	Boys need more protein and energy than girls for growth. Girls need more iron than boys to replace menstrual losses.
105		Children should be encouraged to eat a variety of foods from each of The Eatwell guide's four main food groups, what are they?	Fruit and vegetables. Bread, rice, potatoes, pasta and other starchy foods. Milk and dairy foods. Meat, fish, eggs, beans and other non-dairy sources of protein.
106		Define allergic reaction.	It is the way in which the body responds to certain foods ie rash or swelling
107	Allergies & Intolerances	What is Coeliac disease?	Allergy to gluten, the protein found in cereals; wheat, rye & barley
108		Explain lactose intolerance.	It is a reaction to the sugar (lactose) found in dairy products avoid cows, sheep & goats' milk. Symptoms are - Diarrhoea, nausea and sometimes, vomiting, stomach cramps, bloating.
109		What is the difference between an allergy and an intolerance?	A food allergy is a serious, often life-threatening reaction to a particular food that involves the immune system. Food intolerance is less serious causing vaguer, more general symptoms.
110		Why do allergies occur?	Allergies to food are caused when the immune system wrongly treats proteins found in food as a threat to the body.

111	Food Hygiene	What are the 4 Cs?	Cleaning, cooking, chilling, cross-contamination.
112		Hot food must be served piping hot, that is above 63°C – what temperature is this and why is it important?	Hot holding temperature 63°C. When you display hot food on a buffet, you should use suitable hot holding equipment to keep it above 63°C. Food that has not been used within two hours, should either be reheated until it is steaming hot and put back in hot holding or chilled down as quickly as possible to 8°C or below. If it has been out for more than two hours throw it away. Remember to keep the food at a safe temperature until it is used.
113		Why should food in the fridge be covered?	To prevent cross contamination and moisture loss.
114		What is cross-contamination?	The process by which bacteria are transferred from one area to another.
115		What are the main carriers of bacteria and causes of cross contamination?	Humans. Rubbish. Pets and other animals. Food, e.g. raw meat or poultry.
116	COSHH & HACCP	What is COSHH?	COSHH is the law that requires employers to control substances that are hazardous to health.
		How would you ensure COSHH is followed?	Providing information, instruction and training for employees and others. Keeping all control measures in good working order.
117		What does HACCP stand for?	Hazard Analysis Critical Control Point.
118		What does HACCP mean?	HACCP is a <i>system</i> to identify specific hazards and risks associated with food production and to describe ways to eliminate or reduce problems. HACCP identifies <i>control points</i> and <i>critical control points</i> in the making of a food product and works out ways to eliminate or reduce the problems. HACCP helps lay down the foundations for <i>safe</i> food products since it sets up a <i>quality assurance programme</i>.
119		What is a hazard?	In food products a hazard is anything that can harm a customer. <i>Biological:</i> such as salmonella in chicken. <i>Chemical:</i> such as cleaning chemicals in food. <i>Physical:</i> such as glass in food.
120	Types of Bacteria	Name four food poisoning bacterias, their sources and symptoms.	<i>E. coli</i> Found in ground beef, contaminated fruits and vegetables. <i>Symptoms include diarrhoea, vomiting, blood in diarrhoea.</i> <i>Causes gastro enteritis in humans.</i> – <i>Salmonella</i> Found in raw meats, poultry, eggs, sprouts, fruit and vegetables. <i>Symptoms include diarrhoea, vomiting and fever.</i> – <i>Listeria</i> Found in soft cheese, pate and unpasteurised milk. Causes symptoms like flu. Can cause miscarriage or premature labour. So possible carrier foods should be avoided by pregnant women. <i>Campylobacter</i>

		Found in raw or undercooked meat, particularly raw poultry, unpasteurised milk, untreated water, mushrooms and shellfish (only occasionally.) Causes symptoms of sickness, diarrhoea and nausea.
121		Bacteria are single celled organisms that are able to reproduce rapidly, what is this called? Binary Fission.
122		What is a pathogen? Bacteria that make you sick. To get food they need to survive and reproduce. They produce poisons (toxins) that result in fever, headache, vomiting, and diarrhea and destroy body tissue
123		Examples of good bacteria. <i>Lactobacillus</i>: makes cheese, yogurt, & buttermilk and produces vitamins in your intestine. <i>Leuconostoc</i>: makes pickles & sauerkraut. <i>Pediococcus</i>: makes pepperoni, salami, & summer sausage.
124		What are bacteria? Single celled organisms. Very small. Need a microscope to see. Can be found on most materials and surfaces. Billions on and in your body right now Some are scavengers Share the environment around them Example: The bacteria in your stomach are now eating what you ate for breakfast Some are warriors (pathogens) They attack other living things Example: The bacteria on your face can attack skin causing infection and acne.
125	Key Temperatures	What temperature should a fridge be at? 0-5 °C
126		What temperature should a freezer be kept at? -18 to -21°C
127		What is the core temperature for cooked foods? 75 °C
128		What is the hot holding temperature? 63 °C
129		What is body temperature? 37 °C This is also the temperature where bacteria multiply the most.
130	First Aid	What does RIDDOR stand for? The Reporting of Injuries, Diseases and Dangerous Occurrences Regulations 1995 in the work place.
131		List the information to be included on the accident form. 1. Name of employer 2. Name of organisation 3. Name of injured person 4. Describe the kind of incident 5. Describe the injury 6. About the kind of accident 7. Describing what happened 8. Dangerous occurrences 9. Your signature <i>Example of an accident:</i> A customer is accidentally scalded while being served hot soup by staff and is taken to hospital for treatment.
132		Burns and scalds what are they? Scalds are the damage caused by contact with hot fluids. The cause of a burn may be: Direct heat - flames, hot surfaces, hot liquids or gases.

		<p>Electrical - faulty wiring, old plugs. Chemical - strong cleaning fluids. Both burns and scalds damage the body by removing the layer of skin that protects the body from infection. Symptoms: Extreme pain, Swelling around site of burn, Redness and blistering. Put the burn under cold running water for at least 10 minutes. Cover wound with cling film placed lengthways over the area - avoid wrapping it tightly round the area.</p>
133	Keep knives sharp - why?	If your knife is sharp, it will slide easily through what you are cutting, with little force involved.
134	A kitchen cut is most likely to affect a finger or hand, which you should then keep covered to prevent infection getting in.	Rinse the cut under cold water then gently dry it with a clean or sterile swab and apply a blue plaster.
135	What does EHO stand for?	Environmental Health Officer.
136	What is the role of the environmental health officer (EHO)?	Environmental Health Officers (EHOs) are employed to look after the safety and hygiene of food through all the stages of manufacture or production from distribution to storage and service.
137	Environmental health officers enforce which laws?	<p>The Food Safety Act. This covers food safety from the manufacturer or producer to the point of sale. This might involve different companies or premises e.g. suppliers, manufacturers or kitchens, shops or restaurants.</p> <p>The Food Composition Regulations. This specifies what ingredients CAN or CANNOT be used in the manufacture of foods e.g. bread, breakfast cereals and use of additives.</p> <p>The Food Safety Act (General Food Hygiene) Regulations. This ensures food producers HANDLE all food hygienically.</p> <p>The Food Safety Act (Temperature Control) Regulations. These identify specific temperatures at which to store or hold food.</p>
138	What will Environmental Health Officers (EHOs) look at?	<p>Staff - properly dressed, clean nails, no jewellery, hair covered or tied back, good hygiene habits.</p> <p>Processes in the work place - handling of food, use of equipment, use of colour coded boards, washing up, disposal of waste.</p> <p>Storage of food - fridges, freezers and dry stores. Are they the correct temperature, clean, tidy and orderly? Does the kitchen have good systems in place, e.g. stock rotation and temperature logs?</p> <p>Equipment - this should be clean, well maintained and with safety notices if appropriate.</p> <p>Temperature of Foods - the use of probes to check food is at the correct temperature.</p>
139	Under the Food Safety Act- Environmental Health Officer (EHO) can?	<p>Close down dirty premises on the spot. Impose fines of £20,000 or imprisonment. Take legal action for manslaughter. <i>Premises can be inspected at anytime.</i></p>

140	Legislation	The Food Safety Act covers?	Food quality. Food safety. Food composition. Food labelling and advertising.
141		What do do in the event of a fire?	Raise the alarm. Call the fire brigade. If possible, turn off gas supply, electricity, fans. Try to fight the fire with the appropriate extinguisher. Close doors and windows. Leave the building and go to the assembly point. Do not delay in raising the alarm or calling the fire brigade. Do not use lifts. Do not stop to collect belongings. Care must be taken to use the correct fire extinguisher.
142		What do Food Hygiene Regulations cover?	Food premises - clean, well maintained, have hot and cold water, first aid, fire prevention, good ventilation etc. Personal hygiene - correct footwear, uniform, headwear, good personal habits, good health and cleanliness. Hygienic practices - food stored correctly, waste disposed of hygienically, good cleaning schedules.
143		The HASAWA (Health & Safety at Work Act) covers?	Employers must provide safe working area, supervision, instructions, training of staff, cleaning, first aid and clothing. Employees must also take care of their own health and safety, not endangering others and no misusing premises or equipment.
144		What is a risk assessment?	A risk assessment is a summary of what (in your place of work) could cause harm to people.
145	Chemical & Physical Structure	Eggs are an HBV and show all protein characteristics.	Coagulation - a liquid changing to a solid. Foam formation/aeration - when whisked. Gluten formation - when bread dough is worked, gluten strands stretched. Denaturation - natural qualities are altered by a marinade, structure and texture change.
146		Chemical reactions that take place with carbohydrates.	Carbohydrates - Gelatinisation. Dextrinization. Sugars - Caramelisation. Crystallization.
147		Scientific reactions of fats.	Shortening - crumbly texture Aeration - Creaming, trapping air. Plasticity - Melting points of fats. Emulsification of fats.
148		Chemical reactions that occur with some fruits and vegetables.	Oxidisation when peeled. Enzymic browning when cut.
149		Science of good bacteria	Yoghurt - bacteria feeds on lactose, converts into lactic acid, denatures milk protein and thickens product. Rennet enzyme - separates milk into curds and whey for making cheese.

150	Effects of heat	Name four methods of cooking.	Boiling, simmering, steaming, poaching, pressure cooking, stewing, blanching, bain marie or water bath, shallow frying, sauteing, cooking au gratin, deep frying, stir-frying, braising, flambéing, fondue cookery, baking, roasting, casseroles, pot roasting, grilling, microwaving.
151		Methods of heat exchange?	Conduction - This happens when heat is directly touching a piece of equipment i.e. a pan. Convection - This only happens in liquids or gases. A convection current is caused by the hot liquid rising and allowing colder liquid to drop down. Convection currents also happen in ovens. Radiation - This occurs through space or air via infra-red or microwaves. Infra-red through the grill, foods absorb microwaves which heat the food.
152		Why do we cook food?	Foods need to be broken down so the body can digest them easily. To destroy harmful bacteria. Heating breaks down animal proteins & softens vegetables. Cooking brings out the flavour in foods. Heating helps produce an appetising smell. To make food look more attractive.
153		Foods contain protein, fat, carbohydrates, vitamins, minerals & water.	Heat can destroy important vitamins in food. Due to this, cooking times should be kept short & the correct methods should be used.
154		How is heat transferred during the cooking process?	As heat gives energy to molecules in food, they start to vibrate and move. The faster they move the more heat is produced.
155	Bone Health	Define the term peak bone mass.	Peak bone mass is reached at the age of about 20 - 35 years. Around this age bone is at its strongest. After this age, bone mass gradually decreases. Peak bone mass can be increased by ensuring that the diet contains adequate amounts of vitamin D and calcium during childhood, adolescence and early adulthood, and by regular activity
156		Bone strength is affected by what factors?	Genetic factors - some ethnic groups may have stronger bones in general than others. Gender - men tend to have a greater bone mass than women. Diet - calcium and vitamin D, in particular, are important for strong bones. Physical activity - regular exercise (especially weight bearing exercise) is important for strong bones. Body weight - heavier people have stronger bones (the bones respond to the weight that they have to carry.) Hormones - irregular or loss of menstrual periods can cause bone loss, e.g. during menopause.
157		An adequate calcium intake at all stages of life (coupled with an active lifestyle) helps to ensure that bones are as strong as possible which will prevent bone diseases such as?	Rickets in children and osteomalacia in adults. In the past years, an increasing number of rickets has been reported in the UK after having been considered extinct.
158		Explain rickets?	Rickets affects the structure of the growing bone, the bones lack calcium and are weak. The weight

		of the body causes the bones of the legs to become bent. Osteomalacia causes pain and muscle weakness.
159	Vitamin D is important for healthy bones because it is needed for the absorption of calcium from food; vitamin D is made in the skin when it is exposed to sunlight list two food sources.	Good sources are oily fish, eggs, butter, meat and margarines fortified with vitamin D. By law margarine is fortified with vitamin D, and many low-fat spreads and breakfast cereals are also fortified.
160	What is CVD?	Cardiovascular disease is a very serious health condition that keeps the heart or blood vessels from working properly.
161	What is a Stroke?	A stroke happens when a blood vessel that carries oxygen to the brain gets blocked or bursts. When that happens, blood can't deliver oxygen to part of the brain and that part of the brain starts to die.
162	What Can You Do to Eat Heart Healthy?	Eat plenty of fruits and vegetables. Try to eat a variety of fruits and vegetables each day. Choose whole-grain foods (like whole wheat bread, oatmeal, brown rice). These foods can be a good source of dietary fibre. Eat fish, especially oily fish (like salmon, trout, herring), at least twice a week. Limit your intake of saturated and trans fats. Limit the amount of red meat you eat and choose lean meats and skinless poultry.
163	Who is at risk of heart disease?	People who include lots of fats in their diet. Is most likely to occur in people that have a high blood cholesterol level, high blood pressure, who smoke, where it's heredity, who are obese, under stress and do not exercise.
164	What is Coronary Heart Disease?	Coronary heart disease (CHD) is when your coronary arteries become narrowed by a build-up of fatty material within their walls. These arteries supply your heart muscle with oxygen-rich blood. CHD is sometimes called ischaemic heart disease.
165	Why is portion control important?	Helps the chef plan their shopping list and know how much to buy. Helps in the working out of the selling price and profit that needs to be made. Reduces waste. Customer satisfaction is achieved as all have same sized portions. Consistent plates.
166	How to have consistent portions?	Using the same size scoop or ladle keeps portions EQUAL. Scoop for ice cream. Ladle for soup. Scoop for mash potato.
167	Counting can help.	Some foods can simply be counted into a portion. Eg 3 chicken wings or 2 sausages.
168	Some foods decided on weight.	Some foods are advertised as being a certain weight e.g. 200g sirloin steak.
169	How to work out the selling price of your dish.	Cost of ingredients x 100/40= selling price.

170	Social and Economic	People choose products for a wide variety of reasons.	Nutritional needs. Financial needs. Lifestyle needs. Social, moral and ethical needs.
171		Food provenance is an important consideration to some.	Where the food comes from. Who makes the food. How the food is made. When the food is made.
172		What is fair and ethical trading?	Fairtrade ingredients are bought directly from the farmer, cutting out the middle men. Ethical trading means that the basic rights of the employees of third world countries are respected. Food suppliers such as supermarkets require food manufacturers to follow ethical trading.
173		What are the benefits of organic food?	Organic food is not covered in poisonous chemicals. Organic food may contain more nutrients.
174		What are the needs of the food manufacturer?	Food manufacturers must produce foods that people want to buy but that also make them a profit. They must match their products to people's financial, nutritional, ethical and cultural lifestyle needs. At the same time, however, they must match their own production and cost needs. They must also make the product look and taste good.
175	Sustainability	Define sustainability.	Sustainability is practised by the use of resources at rates that do not exceed the capacity of the Earth to replace them.
176		What is food security?	For all consumers to have access at all times to sufficient, safe and nutritious food for an active and healthy life at affordable prices.
177		What is a sustainable diet?	Vegetarian and plant-based diets.
178		Reduce the environmental impact.	Buy local. Buy in season.
179		Reduce unnecessary food packaging.	Reusable and recyclable packaging can make a big difference to the environment.
180	Food Miles/Carbon Footprint	Food miles can be reduced by <u>buying locally</u> and selecting <u>seasonal produce</u> .	Sustainability.
181		Greenhouse gas emissions produced by growing, rearing, farming, processing, transporting, storing, cooking and disposing of the food you eat.	Carbon footprint.
182		Ninety five per cent of the fruit and half of the vegetables in the UK are...	Imported.
183		Concern for our environment continues to grow and as the biggest contributor to greenhouse gasses is the production of CO ₂ from carbon emissions.	Food transportation.
184		Distance from field to fork.	Food miles.
185	Packaging	Why is packaging used?	To keep the product fresh and to give the consumer information about the product they are buying.
186		What should be on packaging?	Name of food. Name and address of manufacturer or seller. Storage instructions.

		<p>Cooking or preparation instructions.</p> <p>Weight.</p> <p>List bar code.</p> <p>Suitable for vegetarians.</p> <p>List of ingredients.</p>
187	What safety features are found on packaging?	<p>Tamper evident seals.</p> <p>Plastic collars on bottles.</p> <p>Tear away strips.</p> <p>Foil seals.</p> <p>Plastic films.</p> <p>Jam jar lids with press to seals.</p> <p>Ring pulls on tins.</p>
188	What is MAP?	<p>Modified atmosphere packaging is a way of extending the shelf life of fresh food products. The technology substitutes the air inside a package with a protective gas mix.</p>
189	A new type of packaging is a bio-degradable and compostable film why is this good?	<p>It is designed to significantly increase the shelf life of fresh produce, including sensitive, high respiration products like strawberries and potatoes.</p>
190	How have new technologies helped the food industry?	<p>Foods with health promoting/disease preventing properties.</p> <p>Products with specific health benefits - nutraceuticals.</p>
191	What is a meat analogue?	<p>Meat substitute, soya, TVP, Quorn.</p>
192	Why are there concerns around genetically modified foods?	<p>Long-term health effects aren't known.</p> <p>Environmental concerns.</p> <p>Can eliminate some wildlife/affect the environment.</p> <p>Possible production of toxic substances may transfer genes to bacteria to become pathogenic.</p> <p>Potential harmful side effects/long-term risks.</p>
193	Explain food fortification.	<p>Fortification involves the addition of nutrients to foods irrespective of whether or not the nutrients were originally present in the food.</p>
194	What are functional foods?	<p>Foods with health promoting/disease preventing properties.</p> <p>Products with specific health benefits - nutraceuticals.</p>
195	What needs to be included in your reasons for choice?	<p>Why you have chosen your dishes, skills, popularity.</p>
196	What is a requisition?	<p>List of ingredients.</p>
197	How should you write a time plan?	<p>3 columns including timings, method and special points.</p>
198	What is a special point?	<p>Points that need to be considered when in the kitchen that are not included in the recipe.</p>
199	What does NEA stand for?	<p>Non-Examination Assessment.</p>

200	Exam Words	Assess	Describe a topic's positive and negative aspects and say how useful or successful it is, or considers its contribution to knowledge, events or processes (this is usually about how important something is).
201		Compare	Put items side by side to see their similarities and differences – a balanced (objective) answer is required.
202		Discuss	Give details of processes, properties, events and so on.
203		Evaluate Justify	Similar to discuss, but with more emphasis on a judgement in the conclusion. Give reasons to support a statement – it may be a negative statement, so be careful.
204		Explain	Give detailed reasons for an idea, principle or result, situation, attitude and so on. You may need to give some analysis as well.

Skills	Slicing	Aerating	Reduce	Uniform	Moulding	Whisking
Kneading	Whisking	Rolling	Simmer	Chilling	Filleting	Butterflying
Peeling	Frying	Encasing	Sample	Mixing	Butchery	Stuffing
Blending	Baking	Enrobing	Season	Binding	Piping	Glazing



Knowledge Organiser

Food Preparation and Nutrition

GCSE Food Preparation and Nutrition WJEC