




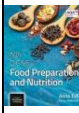
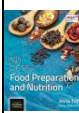
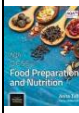

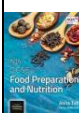
PLC - GCSE - AQA - Food preparation and Nutrition


Written Paper - 50% of GCSE - 1h 45mins




Name _____

1: Food, nutrition and health





Macronutrients	Where to find in textbook	Red	Amber	Green
Protein <ul style="list-style-type: none"> low and high biological value proteins protein complementation protein alternatives 	 p2-9			
Fats <ul style="list-style-type: none"> saturated fats unsaturated fats (monounsaturated and polyunsaturated) 	 p10-15			
Carbohydrates <ul style="list-style-type: none"> starch (polysaccharides) sugars (monosaccharides/disaccharides) dietary fibre 	 p16-21			

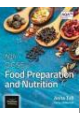

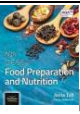
Micronutrients		Red	Amber	Green
Fat soluble vitamins <ul style="list-style-type: none"> vitamin A vitamin D vitamin E vitamin K 	 p22-23			
Water soluble vitamins <ul style="list-style-type: none"> B group – B1 (thiamin), B2 (riboflavin), B3 (niacin), folic acid, B12 vitamin C (ascorbic acid) loss of water soluble vitamins when cooking (B group and Vitamin C) 	 p24 - 25			
Antioxidant functions of vitamins <ul style="list-style-type: none"> The role of antioxidants in protecting body cells from damage (A, C, E) 	 p27			
Minerals <ul style="list-style-type: none"> Calcium Iron Sodium (salt) Fluoride Iodine Phosphorus. 	 p30-35			
Water <ul style="list-style-type: none"> The importance of hydration and the functions of water in the diet. how water is lost from the body how much water/fluid is needed each day 	 p36-37			

Nutritional needs and health		Red	Amber	Green
Making informed choices for a varied and balanced diet <ul style="list-style-type: none"> the current guidelines for a healthy diet portion size and costing when meal planning how peoples' nutritional needs change and how to plan a balanced diet for different life stages how to plan a balanced meal for specific dietary groups 	 p38-57			

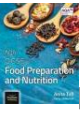
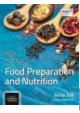
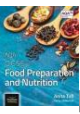
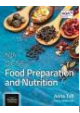
<ul style="list-style-type: none"> how to maintain a healthy body weight throughout life. 				
<p>Energy needs</p> <ul style="list-style-type: none"> the basal metabolic rate (BMR) and physical activity level (PAL) and their importance in determining energy requirements the recommended percentage of energy intake provided by protein, fat and carbohydrates (starch and sugar) factors which affect the BMR, such as age, gender and PAL. Their importance in achieving energy balance 	 <p>p58-62</p>			
<p>How to carry out nutritional analysis</p> <ul style="list-style-type: none"> How to plan and modify recipes, meals and diets to reflect the nutritional guidelines for a healthy diet. 	 <p>p63-69</p>			
<p>Diet, nutrition and health</p> <ul style="list-style-type: none"> how diet can affect health and how nutritional needs change in relation to: <ul style="list-style-type: none"> Obesity cardiovascular health (coronary heart disease (CHD) and high blood pressure) bone health (rickets and osteoporosis) dental health iron deficiency anaemia Type 2 diabetes 	 <p>pg70-77</p>			

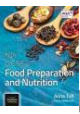
2. Food science

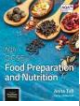
Cooking of food and heat transfer		Red	Amber	Green
<p>Why food is cooked and how heat is transferred to food</p> <ul style="list-style-type: none"> the reasons why food is cooked how preparation and cooking affect the appearance, colour, flavour, texture, smell and overall palatability of food how heat is transferred to food through: conduction, convection, radiation. 	 <p>p78-89</p>			
<p>Selecting appropriate cooking methods</p> <ul style="list-style-type: none"> how preparation and cooking affect the appearance, colour, flavour, texture, smell and overall palatability of food Water based, fat based, dry methods 	 <p>p90-104</p>			
<p>Proteins</p> <ul style="list-style-type: none"> protein denaturation protein coagulation gluten formation foam formation. 	 <p>p105-115</p>			
<p>Carbohydrates</p> <ul style="list-style-type: none"> Gelatinisation Dextrinisation Caramelisation 	 <p>p116-125</p>			

<p>Fats and oils</p> <ul style="list-style-type: none"> Shortening Aeration Plasticity Emulsification 	 <p>p126-139</p>			
<p>Fruit and Vegetables</p> <ul style="list-style-type: none"> the scientific principles underlying: enzymic browning oxidation 	 <p>p162-163</p>			
<p>Raising agents</p> <ul style="list-style-type: none"> chemical (baking powder, bicarbonate of soda, self raising flours which produce carbon dioxide) mechanical (whisking, beating, folding, sieving, creaming and rubbing in – all incorporate air into the mixture) steam is produced when the water in any moist mixture reaches boiling point biological (yeast). 	 <p>p140-157</p>			

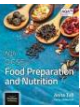
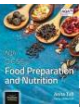
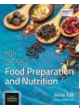
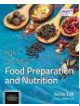
3. Food safety

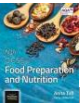
Food spoilage and contamination		Red	Amber	Green
<p>Microorganisms and enzymes</p> <ul style="list-style-type: none"> the growth conditions for microorganisms and enzymes and the control of food spoilage bacteria, yeasts and moulds are microorganisms high risk foods enzymes are biological catalysts usually made from protein 	 <p>p158-160</p>			
<p>The signs of food spoilage</p> <ul style="list-style-type: none"> enzymic action: ripening of bananas, browning of some fruits mould growth: eg on bread and cheese. Recognise the signs of mould growth on foods yeast action on fruits eg grapes, strawberries and tomatoes. 	 <p>p161-164</p>			
<p>Microorganisms in food production</p> <ul style="list-style-type: none"> moulds in the production of blue cheese yeasts to raise bread bacteria in yoghurt and cheese production 	 <p>p165-170</p>			
<p>Bacterial contamination</p> <ul style="list-style-type: none"> the different sources of bacterial contamination the main types of bacteria which cause food poisoning the main sources and methods of control of different food poisoning bacteria types the general symptoms of food poisoning 	 <p>p171-184</p>			

Principles of food safety		Red	Amber	Green
<p>Buying and storing food</p> <ul style="list-style-type: none"> temperature control: freezing, chilling, danger zone, cooking, reheating, ambient storage date marks: 'best before' and 'use by' dates covering foods. 	 <p>p185-191</p>			

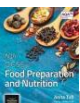
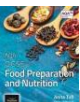
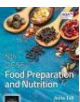
<p>Preparing, cooking and serving food</p> <ul style="list-style-type: none"> personal hygiene clean work area separate raw and cooked foods and use of separate utensils correct cooking times appropriate temperature control including: defrosting and reheating appropriate care with high risk foods correct use of food temperature probes. 	 <p>p192-201</p>			
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4. Food Choice

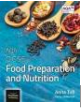
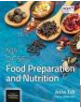
Factors affecting food choice		Red	Amber	Green
<p>Factors which influence food choice</p> <ul style="list-style-type: none"> To know and understand factors which may influence food choice 	 <p>p202-210</p>			
<p>Food choices</p> <ul style="list-style-type: none"> food choice linked to the following religions and cultures: Buddhism, Christianity, Hinduism, Islam, Judaism, Rastafarianism and Sikhism food choice linked to the following ethical and moral beliefs: animal welfare, fairtrade, local produce, organic, Genetically Modified (GM) foods food choice linked to food intolerances (gluten and lactose) and the following allergies: nuts, egg, milk, wheat, fish and shellfish 	 <p>p211-219</p>			
<p>Food labelling and marketing influences</p> <ul style="list-style-type: none"> How information about food available to the consumer, including labelling and marketing, influences food choice. mandatory information included on food packaging in accordance with current European Union and Food Standards Agency (FSA) legislation non-mandatory information: provenance, serving suggestions how to interpret nutritional labelling how food marketing can influence food choice eg buy one get one free, special offers, meal deals, media influences, advertising, point of sales marketing 	 <p>p220-236</p>			
<p>British and international cuisines</p> <ul style="list-style-type: none"> food products from British tradition and two different cuisines: distinctive features and characteristics of cooking equipment and cooking methods used eating patterns presentation styles 	 <p>p237-246</p>			

<ul style="list-style-type: none"> • traditional and modern variations of recipes 				
<p>Sensory evaluation</p> <ul style="list-style-type: none"> • sensory testing methods • how taste receptors and olfactory systems work when tasting food • importance of senses when making food choices: sight, taste, touch and aroma • preference tests: paired preference, hedonic • discrimination tests: triangle • grading tests: ranking, rating and profiling • how to set up a taste panel • controlled conditions required for sensory testing • evaluating how senses guide • evaluating a wide range of ingredients and food from Britain and other countries • how to test sensory qualities of a wide range of foods and combinations. 	 <p>p247-254</p>			

5. Food provenance

Environmental impact and sustainability of food		Red	Amber	Green
<p>Food Sources</p> <ul style="list-style-type: none"> • grown ingredients: fruits, vegetables and cereals • reared ingredients: meat and poultry • caught ingredients: fish and understanding of: • organic and conventional farming • free range production • intensive farming • sustainable fishing • advantages and disadvantages of local produced foods, seasonal foods and Genetically Modified (GM) foods 	 <p>p255-262</p>			
<p>Food and the environment</p> <ul style="list-style-type: none"> • Environmental issues associated with food. • seasonal foods • sustainability eg fish farming • Transportation • organic foods • the reasons for buying locally produced food • food waste in the home/food production/retailers • environment issues related to packaging • carbon footprint. 	 <p>p263- 268</p>			
<p>Sustainability of food</p> <ul style="list-style-type: none"> • The impact of food and food security on local and global markets and communities. • an awareness of: • climate change • global warming • sustainability of food sources • insufficient land for growing food, availability of food, problems of drought and flooding 	 <p>p269-273</p>			

<ul style="list-style-type: none"> ● Fairtrade ● Genetically Modified (GM) foods ● food waste. 				
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Food processing and production		Red	Amber	Green
<p>Food production</p> <ul style="list-style-type: none"> ● Primary processing related to the: rearing, fishing, growing, harvesting and cleaning of the raw food material (milling of wheat to flour, heat treatment of milk, pasteurised, UHT) ● Secondary processing related to: how the raw primary processed ingredients are processed to produce a food product (flour into bread and pasta, milk into cheese & yoghurt, fruit into jams) ● Loss of vitamins through heating and drying ● The effect of heating and drying on the sensory characteristics of milk 	 <p>p274-283</p>			
<p>Technological developments associated with better health and food production</p> <ul style="list-style-type: none"> ● Technological developments to support better health and food production including fortification and modified foods with health benefits. ● Cholesterol lowering spreads, fortified foods: vitamins and minerals added to foods, use of additives: colourings, emulsifiers and stabilisers, flavourings, and preservatives 	 <p>p284-289</p>			