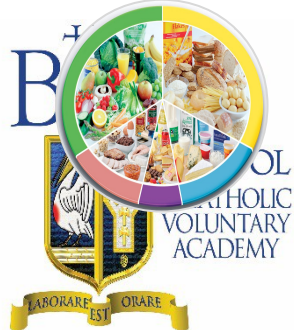




**PERSONAL LEARNING  
KS4**

**GCSE Food Preparation  
Nutrition**





## Parent Curriculum Information:

### Food + Nutrition

**Subject:** GCSE Food Preparation and Nutrition

**Year Group:** 11

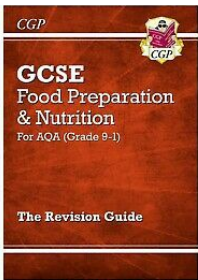
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What Specification (syllabus) is being taught?	GCSE Food Preparation and Nutrition  <a href="http://www.aqa.org.uk/subjects/food/gcse/food-preparation-and-nutrition-8585">http://www.aqa.org.uk/subjects/food/gcse/food-preparation-and-nutrition-8585</a>
What are the key topics and themes? When will they be taught?	Topics that need covering are – <ul style="list-style-type: none"> <li>• Food, nutrition and health</li> <li>• Food science</li> <li>• Food safety</li> <li>• Food choice</li> <li>• Food provenance.</li> </ul>
How will my son or daughter be assessed? When do these assessments take place?	NEA – Food Investigation task worth 15% of GCSE – Sept 22 – Nov 22 NEA – Food Preparation Task worth 35% of the GCSE – Nov 22 – March 23  EXAM – worth 50% of GCSE grade – summer 2023– revision to be completed prior to student's departure for study leave, essentially this will involve revising work from year 9 and 10.
What can my son or daughter do for revision at home? What materials are provided or available online?	BBC Bitesize: <a href="https://www.bbc.co.uk/bitesize/subjects/zdn9jhv">https://www.bbc.co.uk/bitesize/subjects/zdn9jhv</a>  CCP Revision Guide:    In addition to this, please use workbooks/sheets from years 9-10 and the revision workbooklets that will be handed out from March.  Practice exam papers - <a href="http://www.aqa.org.uk/subjects/food/gcse/food-preparation-and-nutrition-8585">http://www.aqa.org.uk/subjects/food/gcse/food-preparation-and-nutrition-8585</a>

MACRO-NUTRIENTS	FOOD, NUTRITION AND HEALTH			
Protein	<p>I can identify low and high biological value proteins</p> <p>I understand what protein complementation means</p> <p>I know some protein alternatives eg textured vegetable protein (TVP), soya, mycoprotein and tofu.</p> <p>I know the functions of protein</p> <p>I know the main sources of protein</p> <p>I understand the effects of protein deficiency and excess</p> <p>I know what the dietary reference values are for protein.</p>			
Fat	<p>I know what saturated fats and unsaturated fats are (monounsaturated and polyunsaturated).</p> <p>I know the functions of fat</p> <p>I know the main sources of fat</p> <p>I understand the effects of fat deficiency and excessive fat intake</p> <p>I know what the dietary reference values are for fat.</p>			
Carbohydrates	<p>I know that carbohydrates consist of starch (polysaccharides) and sugars (monosaccharides/disaccharides) and dietary fibre.</p> <p>I understand the functions of carbohydrates</p> <p>I know the main sources of carbohydrates</p> <p>I understand the effects of carbohydrates deficiency and excess</p> <p>I know what the dietary reference values are for carbohydrate.</p>			
MICRO-NUTRIENTS - Vitamins	FOOD, NUTRITION AND HEALTH			
Fat soluble vitamins A D E K	<p>I know the functions, main sources, effects of deficiency and excess and related dietary reference values of fat soluble vitamins A D E &amp; K</p>			
Water soluble vitamins B & C	<p>I know the functions, main sources, effects of deficiency and excess and related dietary reference values of water soluble vitamins B &amp; C</p> <p>I know how preparation and cooking affects the nutritional properties of food.</p>			
Antioxidant functions of Vitamins A C & E	The role of antioxidants in protecting body cells from damage.			
MICRO-NUTRIENTS - Minerals	FOOD, NUTRITION AND HEALTH			
Calcium, iron, sodium (salt), fluoride, iodine & phosphorus.	<p>I know the functions, main sources, effects of deficiency and excess, related dietary reference values of these 6 minerals.</p>			

<b>MICRO-NUTRIENTS - Water</b>	<b>FOOD, NUTRITION AND HEALTH</b>			
The importance of hydration and the functions of water in the diet.	I know the functions of water to eliminate waste from the body, cooling and for digestion I know how water is lost from the body I know how much water/fluid is needed each day I know on what occasions extra fluids are needed.			
<b>Making informed choices for a varied and balanced diet</b>	<b>NUTRITIONAL NEEDS AND HEALTH</b>			
The current guidelines for a healthy diet The importance of 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 How to maintain a healthy body weight throughout life.	I know the current guidelines for a healthy diet e.g. eat well guide  I understand the nutritional needs for the following life stages: young children, teenagers, adults and the elderly  I know how to plan a balanced meal for specific dietary groups: vegetarian and vegan, coeliac, lactose intolerant and high fibre diets.			
<b>Energy Needs</b>	<b>NUTRITIONAL NEEDS AND HEALTH</b>			
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).	I know the factors which affect the BMR, such as age, gender and PAL.  I understand their importance in achieving energy balance the percentage of recommended energy sources from nutrients			
<b>How to carry out a nutritional analysis</b>	<b>NUTRITIONAL NEEDS AND HEALTH</b>			
How to plan and modify recipes, meals and diets to reflect the nutritional guidelines for a healthy diet.	I know how to use current nutritional information and data eg food tables, nutritional analysis software to calculate energy and nutritional value.			
<b>Diet, nutrition and health</b>	<b>NUTRITIONAL NEEDS AND HEALTH</b>			
The relationship between diet, nutrition and health The major diet related health risks.	I know how diet can affect health and how nutritional needs change in relation to: Obesity Cardiovascular health (coronary heart disease (CHD) and high blood pressure) Bone health (rickets and osteoporosis) Dental health Iron deficiency anaemia Type 2 diabetes.			

<b>Cooking of food and heat transfer</b>	<b>FOOD SCIENCE</b>			
The reasons why food is cooked	I know the reasons why we cook food			
The different methods of heat transfer.	I know how preparation and cooking affect the appearance, colour, flavour, texture, smell and overall palatability of food  I know how heat is transferred to food through: conduction/convection/radiation.			
<b>Selecting appropriate cooking methods</b>	<b>FOOD SCIENCE</b>			
Selection of appropriate preparation, cooking methods and times to achieve desired characteristics.	I know how the selection of appropriate preparation and cooking methods can conserve or modify nutritive value or improve palatability  I know the different cookery methods Water based Dry methods Fat based  I know how preparation and cooking affect the appearance, colour, flavour, texture, smell and overall palatability of food eg the use of marinades to denature protein.			
<b>Functional and chemical properties of food</b>	<b>FOOD SCIENCE</b>			
Protein denaturation Protein coagulation Gluten formation Foam formation.	I understand the scientific principles underlying these processes when preparing and cooking food  I understand the working characteristics, functional and chemical properties of proteins.			
Gelatinisation Dextrinisation Caramelisation.	I understand the scientific principles underlying these processes when preparing and cooking food  I understand the working characteristics, functional and chemical properties of carbohydrates.			
Shortening Aeration Plasticity Emulsification.	I know the scientific principles underlying these processes when preparing and cooking food  I understand the working characteristics, functional and chemical properties of fats and oils.			
Enzymic browning Oxidation.	I understand the scientific principles underlying these processes when preparing and cooking food.			

<p>RAISING AGENTS - Chemical (baking powder, bicarbonate of soda, self-raising flours which produce carbon dioxide)</p> <p>Mechanical (whisking, beating, folding, sieving, creaming and rubbing in – all incorporate air into the mixture)</p> <p>Steam is produced when the water in any moist mixture reaches boiling point</p> <p>Biological (yeast).</p>	<p>I know the scientific principles underlying these processes when preparing and cooking food</p> <p>I know the working characteristics, functional and chemical properties of raising agents.</p>			
<b>Food spoilage and contamination</b>	<b>FOOD SAFETY</b>			
Microorganisms and enzymes	<p>I know the growth conditions for microorganisms: role of temperature, moisture, food and time</p> <p>I understand the control of microorganism growth: temperature control, pH, water availability</p> <p>I understand high risk foods: ready to eat moist foods, usually high in protein that easily support the growth of pathogenic bacteria and do not require any further heat treatment or cooking</p> <p>I understand how to control enzymic action: blanching of vegetables before freezing, use of acids to prevent enzymic browning.</p>			
The signs of food spoilage - enzymic action mould growth yeast action.	<p>I can identify –</p> <p>Enzymic action: ripening of bananas, browning of some fruits</p> <p>Mould growth: eg on bread and cheese. Yeast action on fruits eg grapes, strawberries and tomatoes.</p> <p>I can recognise the signs of mould growth on foods</p>			
The use of microorganisms in food production.	I understand that moulds are used in the production of blue cheese, yeasts to raise bread and bacteria in yoghurt and cheese production.			
Bacterial contamination	<p>I understand the different sources of bacterial contamination</p> <p>I know the main types of bacteria which cause food poisoning</p> <p>I can identify the main sources and methods of control of different food poisoning bacteria types</p> <p>I can identify the general symptoms of food poisoning.</p>			

Principles of food safety	FOOD SAFETY			
Buying and storing food	<p>I understand temperature control: freezing: -18°C chilling: 0 to below 5°C danger zone: 5 to 63°C cooking: 75°C reheating: 75°C</p> <p>I know how to correctly use domestic fridges and freezers</p> <p>I understand the meaning of the date marks 'best before' and 'use by'</p>			
The food safety principles when preparing, cooking and serving food.	<p>I understand the importance of - personal hygiene clean work surfaces 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>			
Factors affecting food choice	FOOD CHOICE			
To know and understand factors which may influence food choice.	<p>I know that the following factors affect the food choices we make physical activity level (PAL) celebration/occasion cost of food preferences enjoyment food availability healthy eating income lifestyles seasonality time of day time available to prepare/cook.</p> <p>Students must be able to cost recipes and make modifications.</p>			



Food choice related to religion, culture, ethical and moral beliefs and medical conditions.	<p>I know that food choice is linked to the following religions and cultures: Buddhism, Christianity, Hinduism, Islam, Judaism, Rastafarianism and Sikhism</p> <p>I understand that food choice is linked to the following ethical and moral beliefs: animal welfare, fairtrade, local produce, organic, Genetically Modified (GM) foods</p> <p>I know that food choice can be linked to food intolerances (gluten and lactose) and the following allergies: nuts, egg, milk, wheat, fish and shellfish.</p>			
Food labelling and marketing influences	<p>I know what mandatory information is included on food packaging in accordance with current European Union and Food Standards Agency (FSA) legislation</p> <p>I can identify the non-mandatory information: provenance, serving Suggestions</p> <p>I know how to interpret nutritional Labelling</p> <p>I understand 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>			
	<b>BRITISH AND INTERNATIONAL CUISINES</b>			
Cuisine is defined as: 'a style characteristic of a particular country or region where the cuisine has developed historically using distinctive ingredients, specific preparation and cooking methods or equipment, and presentation or serving techniques'.	<p>I know the distinctive features and characteristics of cooking</p> <p>I understand the equipment and cooking methods used</p> <p>I can identify eating patterns, presentation styles, traditional and modern variations of recipes.</p>			



	SENSORY EVALUATION			
<p>Sensory testing methods</p> <p>How taste receptors and olfactory systems work when tasting food.</p>	<p>I know the importance of senses when making food choices: sight, taste, touch and aroma</p> <p>I understand the different types of sensory testing -</p> <ul style="list-style-type: none"> <li>• preference tests: paired preference, hedonic</li> <li>• discrimination tests: triangle</li> <li>• grading tests: ranking, rating and profiling</li> </ul> <p>I know how to set up a taste panel and the controlled conditions required for sensory testing</p> <p>I can evaluate how senses guide</p> <p>I can evaluate a wide range of ingredients and food from Britain and other countries</p> <p>I know how to test sensory qualities of a wide range of foods and combinations.</p>			
	FOOD PROVENANCE			
<p>Where and how ingredients are grown, reared and caught.</p>	<p>I understand how ingredients are –</p> <p>grown: fruits, vegetables and cereals</p> <p>reared ingredients: meat and poultry</p> <p>caught ingredients: fish</p> <p>I have an understanding of:</p> <p>organic and conventional farming</p> <p>free range production</p> <p>intensive farming</p> <p>sustainable fishing</p> <p>advantages and disadvantages of local produced foods</p> <p>seasonal foods</p> <p>genetically modified (GM) foods.</p>			
<p>Environmental issues associated with food.</p>	<p>I understand how environmental issues are affected by</p> <p>seasonal foods</p> <p>sustainability eg fish farming</p> <p>transportation</p> <p>organic foods</p> <p>I can identify the reasons for buying locally produced food</p> <p>I know about food waste in the home/food production/retailers</p> <p>I understand the environmental issues related to packaging</p> <p>I know what the carbon footprint is.</p>			

The impact of food and food security on local and global markets and communities.	<p>I understand the challenges to provide the world's growing population with a sustainable, secure, supply of safe, nutritious and affordable high quality food.</p> <p>I am aware of -  climate change  global warming  sustainability of food sources  insufficient land for growing food  availability of food  Fairtrade  problems of drought and flooding  Genetically Modified (GM) foods  food waste.</p>			
<b>Factors affecting food choice</b>	<b>FOOD PROCESSING AND PRODUCTION</b>			
<p>Primary and secondary stages of processing and production</p> <p>How processing affects the sensory and nutritional properties of ingredients.</p>	<p>I can identify 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, sterilised and micro-filtered milk)</p> <p>I can identify secondary processing related to: how the raw primary processed ingredients are processed to produce a food product (flour into bread and/ or pasta, milk into cheese and yoghurt, fruit into jams), the loss of vitamins through heating and drying and the effect of heating and drying on the sensory characteristics of milk.</p>			
Technological developments to support better health and food production including fortification and modified foods with health benefits and the efficacy of these.	<p>I know about –  cholesterol lowering spreads  health benefits of fortification  fortified foods: thiamin, niacin, calcium and iron added to white flour, folic acid and iron added to breakfast cereals and vitamins A and D added to fats and low fat spreads</p> <p>I understand the positive and negative aspects of the use of additives: colourings, emulsifiers and stabilisers, flavourings, and preservatives</p> <p>I can identify the positive and negative aspects of Genetically Modified (GM) foods.</p>			