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<p style="text-align: center;"><b>Design and Technology: Eduqas- Food Preparation and Nutrition</b></p> <p>Revision Guide WJEC EDUQAS GCSE Food prep and nutrition revision guide from Hodder education. ISBN 9781471885396</p>			
<p><b>Knowledge and understanding</b></p>			
<p><b>•Nutrition</b></p>			
<p><b>Fats</b> The dietary function and sources of:</p> <ul style="list-style-type: none"> <li>• saturated</li> <li>• unsaturated</li> <li>polyunsaturated</li> <li>Essential fatty acids.</li> </ul>			
<p><b>Protein</b> The dietary function, sources and deficiency of:</p> <ul style="list-style-type: none"> <li>•HBV (high biological value) protein</li> <li>• LBV (low biological value) protein.</li> </ul>			
<p><b>Carbohydrates</b> The dietary function and sources of:</p> <ul style="list-style-type: none"> <li>• sugar</li> <li>• starch</li> <li>•fibre/NSP (non-starch polysaccharides).</li> </ul>			
<p><b>Vitamins</b> The dietary function ,sources and deficiency of the following vitamins:</p> <ul style="list-style-type: none"> <li>• fat soluble A, D</li> <li>• water soluble B1,B2, folic acid, C.</li> </ul>			
<p><b>Minerals</b> The functions, sources and deficiency of:</p> <ul style="list-style-type: none"> <li>• calcium</li> <li>•iron</li> <li>•sodium</li> <li>•fluoride.</li> </ul>			
<p><b>Energy balance</b> Use of energy in the body, mechanical, chemical, heat , electrical -<b>energy requirements</b> age, gender, occupation, physical activity and exercise, life stage: pregnancy <b>Balanced diet</b> DRVs (dietary reference values) Energy from –protein, fat, carbohydrate. Individual nutritional requirements</p>			
<p><b>Dietary guidelines-</b></p> <ul style="list-style-type: none"> <li>•eat less sugar</li> <li>•eat less saturated and hydrogenated fat</li> <li>•eat more fibre, starchy, low GI (glycaemic index) foods</li> <li>•eat less salt.</li> <li>•five-a-day</li> <li>•nutritional labelling</li> <li>• ‘eat-well-plate’ (current UK food choice model)</li> <li>• recommended fish intake.</li> </ul>			
<p><b>Special diets</b></p> <ul style="list-style-type: none"> <li>•vegetarian, vegan, lacto-ovo, lacto, ovo</li> <li>• intolerances, lactose</li> </ul>			

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<ul style="list-style-type: none"> <li>•medical, diabetes mellitus/diabetic, CHD (coronary heart disease), obesity</li> <li>-allergy: nut, celiac.</li> </ul>			
<p><b>Ethnic and religious groups:</b> Hindu faith, Muslim faith, Jewish faith.</p>			
<p><b>Primary and secondary food</b>            Knowledge of the nutritional content, uses, types and functional properties of the following primary foods:</p> <ul style="list-style-type: none"> <li>•cereals, wheat, rice, maize/corn, oats</li> <li>•milk and dairy, milk, cream, cheese, yoghurt</li> <li>•meat and fish, alternative protein foods, Quorn™, TVP (soya), tofu, pulses and peanuts</li> </ul> <p>fruit and vegetables</p> <ul style="list-style-type: none"> <li>• eggs, pasteurized, liquid, frozen, dried, fresh</li> <li>•fats and oils, butter, margarine, low fat spread, plant oils</li> <li>olive, corn, sunflower</li> <li>• Sugar.</li> </ul>			
<p><b>Functional properties and working characteristics</b></p> <ul style="list-style-type: none"> <li>•thickening and gelatinization, setting, coagulation, gelation, aeration, foaming, fermentation, shortening, fortification, browning, binding, coating, glazing, emulsification, dextrinization</li> </ul> <p>caramelisation.</p>			
<p><b>Secondary foods</b>            Knowledge and understanding that by combining primary foods additional properties are produced:</p> <ul style="list-style-type: none"> <li>-increased nutrition,</li> <li>-improved organoleptic (sensory) qualities,</li> <li>- changing texture</li> <li>- changing flavour</li> </ul>			
<p><b>Preservation and processing</b>  <b>The principles of food preservation.</b></p> <ul style="list-style-type: none"> <li>• food spoilage</li> </ul> <p>natural decay            action of enzymes            contamination by microorganisms</p> <ul style="list-style-type: none"> <li>• food poisoning, bacteria, toxins, infections</li> </ul> <p>factors affecting growth            temperature, time, food, pH, O<sub>2</sub>, moisture            food hygiene, correct handling, correct cooking, correct storage of food stuffs, danger zone, kitchen hygiene, personal hygiene, cross-contamination            The Food Safety Act 1990            The Food Hygiene (England), Regulations 2006.</p>			
<p><b>Preservation methods</b>            Methods of food preservation:            hot , cold , dry, chemical ,additives, packaging ,(MAP)/vacuum            Irradiation.</p>			
<p><b>Food preservation techniques — home</b>            Knowledge and understanding of names, uses, advantages/            disadvantages and safety issues of food preservation techniques used in the home:            freezing, drying, use of oven or microwave to dry foods, chemicals</p>			
<p><b>Food preservation techniques — industry</b>            Knowledge and understanding of names, uses, advantages/            disadvantages and safety issues of food preservation techniques used in industry:</p> <ul style="list-style-type: none"> <li>-hot, Pasteurization, sterilization, UHT (ultra-heat treatment)canning</li> <li>-cold, chilling, freezing, cook chill/freeze</li> <li>-dry, sun drying, spray drying, AFD (accelerated freeze drying)</li> </ul>			

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<p>-chemical preservatives -specialist packaging, MAP (modified atmosphere packaging), vacuum packaging.</p>			
<p><b>Processing</b> principles of food processing: •Primary, pasteurisation of milk, milling wheat, washing fruit and vegetables • Secondary, milk made into cheese, flour made into bread, meat into Burgers.</p>			
<p>•<b>Product manufacture</b> Knowledge and understanding of names, uses, advantages/ disadvantages and safety issues of food preparation techniques used in the home: •by hand, using basic equipment, small electrical equipment •electrical equipment</p>			
<p><b>Food processing techniques</b> Food processing techniques — home Knowledge and understanding of names, uses, advantages/ disadvantages and safety issues of food processing techniques used in the home: methods of cooking — moist, boiling, poaching, steaming, stewing, braising methods of cooking — dry, baking, roasting, grilling, barbecuing, frying, microwave other processing methods, shaping and forming, Piping.</p>			
<p><b>Additives</b> Functional properties and use of: sensory characteristics, colours, flavours, artificial sweeteners, herbs and spices -physical characteristics, emulsifiers, stabilisers, gelling, setting, thickening agents raising agents - storage characteristics, preservatives, antioxidants -nutritional characteristics, food fortification and use of nutrients -aids to processing, anti-caking agents other additives acidity regulators and buffers.</p>			
<p><b>Standard components</b> properties and use of the following: •pastries and doughs •powdered mixes sauces and gravies • other standard components stock cubes baking powder pre-blended spices dried and tinned fruit.</p>			
<p>Technological development Modern/novel/smart materials: •man-made modified starches •functional nutraceuticals, pre/probiotics •novel function, sweeteners Meat analogues: Quorn™, tofu, soya •biotechnology chymosin •nano technology. GM</p>			
<p><b>ICT</b> only need to have an awareness of the uses of ICT: •CAD (computer-aided design) adding pictures to text, for example, packaging – clipart, scanned images, digital photographs using CAD packages, for example, product development</p>			

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<ul style="list-style-type: none"><li>– spider diagrams, product profiles, packaging nets, food labels, design idea, databases</li><li>– recipes, nutritional databases, spreadsheets, scaling, costing, stock control</li><li>•CAM (computer-aided manufacture) monitors and controls the automatic production of food products based on set specifications and tolerances</li><li>–sensors and quality control</li><li>–single item production</li><li>•CIM (computer-integrated manufacturing) computers are linked in a network and control both the machinery</li><li>•ICT and CAM in single item production microwave ovens, timers, bread makers, edible icing printer.</li></ul>			
<p><b>Packaging and labelling</b></p> <ul style="list-style-type: none"><li>•materials (use of packaging materials): glass, plastic, metal and foil, paper and cardboard</li><li>• function of packaging</li></ul> <p>advantages and disadvantages of packaging materials</p> <ul style="list-style-type: none"><li>••specialist packaging and reasons for use</li></ul>			