

**GCSE (9–1)**

*Teacher Guide*

# FOOD PREPARATION AND NUTRITION

J309

For first teaching in 2016

## Scheme of Work – Year 10 and 11

Version 1



## Term 1

Commodity group: Fruit and vegetables					
	Week 1: Section C Food Safety	Week 2: Section A Health	Week 3: Section A Nutrients	Week 4: Section A Nutrients	Week 5 and 6: Section B Provenance
(Total 5 hours Over 2 weeks)  <b>Theory</b>  2 hours	Preparing food and Safety ✓ Preventing cross contamination and food poisoning: direct and indirect methods.  ✓ The importance of a healthy diet: Fruit and veg ✓ How to use the major commodity groups to make a balanced food choice. Eatwell guide. ✓ The application of the eight tips for healthy eating.		✓ Types and Functions and Sources –Vitamins, fibre. ✓ Recommended daily amounts of micro nutrients (DRV's): vitamins. ✓ Functions and deficiency. ✓ Fat-soluble vitamins: A (retinol and carotene), D, E, K. ✓ Water soluble vitamins: B1 (thiamine), B2 (riboflavin), B3 (niacin), B9 (Folate/Folic acid), B12 (cobalamin), C (ascorbic acid). ✓ Importance of water. ✓ Water: Functions and deficiency. ✓ Recommended guidelines for daily intake of water. ✓ Sources and foods that give us water.		✓ Food sources and how they are grown: fruits and vegetables. ✓ Advantages and disadvantages of locally produced and seasonal foods. ✓ Where they are grown: organic and non-organic farming. ✓ Classification of fruits and vegetables.
<b>Science</b> 1 hour	Enzymic browning Oxidisation		Testing for vitamin C Fibre content		Nutritional analysis programme

## Half Term

Stand-alone topics		Commodity group: Bread, rice, potatoes, pasta and other starchy foods				
	Week 1: Section B Food choice	Week 2: Section B Food choice	Week 1 and Week 2: Section A Health and Nutrients	Week 3: Section A Nutrients	Week 4: Section B Provenance	
<b>Theory</b>  2 hours	✓ Dietary needs for different stages of life. ✓ Food choice can be affected by cost, enjoyment, preference, seasonality, availability, time of day, activity, celebration or occasion, medical reasons. ✓ Consumer information, food labelling, marketing ✓ Ethical and moral beliefs: Vegetarians (lacto-ovo, lacto, ovo and vegans), animal welfare, local produce, organic food.	✓ Related beliefs of major religions: Buddhism, Hinduism, Islam, Judaism, Rastafarianism and Sikhism. Features and characteristics of individual cuisines. ✓ Recognise traditional ingredients: UK. ✓ Understand religious or cultural factors affecting the cuisine. ✓ Understand traditional cooking methods, presentation and eating patterns. ✓ Recognise how the traditional recipes have been adapted to suit today's society.	✓ The importance of a healthy diet: starchy foods. ✓ Diet-related diseases and conditions: obesity (weight loss and gain). ✓ Recommended daily amounts of macro nutrients (DRV's): carbohydrates ✓ Sources of energy: carbohydrate. ✓ Food allergies and intolerances: gluten (coeliacs).	✓ Units (kcal and kJ) for measuring energy. ✓ The main factors that influence an individual's energy requirements. Gender, life stage, pregnancy/lactation size/ body weight, genetics, occupation and lifestyle. ✓ Excess.	✓ Types and functions: starch. ✓ Complex carbohydrates. ✓ Sources: starch. ✓ Food sources and how they are grown: cereals. ✓ Advantages and disadvantages of locally produced and seasonal foods.	✓ Primary process: How wheat is milled and processed to produce flour. ✓ Secondary process: How flour is used to produce bread and pasta.
<b>Science</b> 1 hour	Acids and alkalis Using an alkali as a raising agent		Gelatinisation Raising agents: yeast		Dextrinisation Caramelisation	

## Term 2

Commodity group: Milk and dairy foods and foods and drinks high in fat						
	Week 1: Section C Health	Week 2: Section A Health	Week 3: Section A Nutrients	Week 4: Section A Nutrients	Week 5: Section B Provenance	Week 6: Section B Provenance
<b>Theory</b> 2 hours	<ul style="list-style-type: none"> <li>✓ The importance of a healthy diet: milk and dairy foods, fat.</li> <li>✓ Diet-related diseases and conditions: obesity, cardiovascular, coronary heart disease (CHD), dental health, bone health (osteoporosis), high blood pressure.</li> <li>✓ Plan recipes, meals and diets based on nutritional analysis.</li> <li>✓ Altering or substituting ingredients, changing the method of cooking or process and changing the portion size.</li> </ul>		<ul style="list-style-type: none"> <li>✓ Basal metabolic rate (BMR) and physical activity level (PAL) and their importance in determining energy requirements.</li> <li>✓ Recommended percentage of daily energy intake</li> <li>✓ Sources of energy: fat.</li> <li>✓ Types and structure: fats and oils (saturated, unsaturated and polyunsaturated).</li> <li>✓ Fat sources: Animal and vegetable: visible and invisible.</li> </ul>		<ul style="list-style-type: none"> <li>✓ Advantages and disadvantages of locally produced food.</li> <li>✓ Primary process: Heat treatment of milk.</li> <li>✓ The processes that raw food undergoes to transform it into a food product.</li> <li>✓ How milk is processed to produce butter, cream, yoghurt and cheese.</li> </ul>	
<b>Science</b> 1 hour	Shortening Aeration		Plasticity		Emulsification	

## Half Term

Stand-alone topics						
	Week 1: Section C Sensory properties	Week 2: The senses (organoleptic properties)	Week 3: Features and characteristics of individual cuisines	Week 4: Section C The reasons why food is cooked	Week 5 and Week 6: Food processing and preserving methods: industrial and domestic	
<b>Theory</b> 2 hours	<ul style="list-style-type: none"> <li>✓ Changes that happen when food is cooked: texture, appearance, colour, taste, sound and aroma.</li> <li>✓ The importance of the senses of sight, taste, touch, smell and hearing and how they work when making food choices.</li> <li>✓ The five basic tastes recognised by receptors (sweetness, sourness, bitterness, saltiness and umami).</li> </ul>	<ul style="list-style-type: none"> <li>✓ How to set up a testing panel.</li> <li>✓ Styles and forms of rating, ranking and profiling systems with the use of appropriate descriptive terminology.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Recognise traditional ingredients: Chosen Culture 1.</li> <li>✓ Understand religious or cultural factors affecting the cuisine.</li> <li>✓ Understand traditional cooking methods, presentation and eating patterns.</li> <li>✓ Recognise how the traditional recipes have been adapted to suit today's society.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Making food safe to eat.</li> <li>✓ Making food more digestible/palatable.</li> <li>✓ Heat transfer through cooking methods.</li> <li>✓ Conduction, convection and radiation.</li> <li>✓ How preparation and cooking methods/processing:               <ul style="list-style-type: none"> <li>- affect the nutritional value</li> <li>- improve the sensory properties.</li> </ul> </li> <li>✓ Enrichment/loss, increase/reduce calorific value, vitamin losses.</li> <li>✓ Texture, flavour, appearance, aroma.</li> </ul>	<ul style="list-style-type: none"> <li>✓ High temperatures: pasteurisation, sterilisation (ultra heat treated (UHT) and canning).</li> <li>✓ Cold temperatures: chilling, freezing, cook-freeze/blast chilling and accelerated freeze-drying (AFD).</li> <li>✓ Using acids, salt and sugar.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Drying and smoking.</li> <li>✓ Controlled atmosphere packaging (CAP)/modified atmosphere packaging (MAP) and vacuum packing and vacuum packing.</li> </ul>
<b>Science</b> 1 hour	Raising agents: chemical agents	Raising agents: air	Raising agents: steam			

## Term 3

	Commodity group: Meat, fish, eggs, beans and other non-dairy sources of protein				Foods and drinks high in sugar
	Week 1: Section A Health	Week 2: Section A	Week 3: Section A Nutrients	Week 4 and Week 5: Section B Provenance	Week 6: Section B
<b>Theory</b> 2 hours	<ul style="list-style-type: none"> <li>✓ The importance of a healthy diet: protein.</li> <li>✓ Recommended daily amounts of macro nutrients(DRV) Types and structure: High biological value (HBV) and low biological value (LBV).</li> <li>✓ Sources of protein: animal and vegetable.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Functions and deficiency.</li> <li>✓ Diet-related diseases and conditions: anaemia.</li> <li>✓ Sources of energy: protein.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Food sources of vitamins.</li> <li>✓ Fat-soluble vitamins: A (retinol and carotene), D, E, K.</li> <li>✓ Water soluble vitamins: B1 (thiamine), B2 (riboflavin), B3 (niacin), B9 (Folate/Folic acid), B12 (cobalamin), C (ascorbic acid).</li> <li>✓ Functions and deficiency.</li> <li>✓ Foods that supply minerals.</li> <li>✓ Minerals: fluoride, calcium, iron, iodine, phosphorus, sodium.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Advantages and disadvantages of locally produced and seasonal foods.</li> <li>✓ Classification of meat, poultry and game.</li> <li>✓ Where and how they are reared: intensive farming methods, free-range products, rearing of the animals.</li> <li>✓ Classification of fish.</li> <li>✓ Where and how they are caught: sustainable fish supply.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Food sources and how they are grown: sugars.</li> <li>✓ Diet-related diseases and conditions: diabetes.</li> <li>✓ Sugar: monosaccharides, disaccharides, starch: complex carbohydrates and fibre. Functions and deficiency.</li> </ul>
<b>Science</b> 1 hour					

## Half Term

	Stand-alone topics					
	Week 1: Section B	Week 2 Section C Food Safety	Week 3: Section C Food Safety	Week 4: Section B Food security	Week 5: Section B Food security	Week 6: Section D Task practice
<b>Theory</b> 2 hours	<p>Technological developments:</p> <ul style="list-style-type: none"> <li>✓ The advantages and disadvantages of fortification.</li> <li>✓ Preservatives, colourings, flavourings and sweeteners, emulsifiers and stabilisers and thickeners, antioxidants.</li> <li>✓ Probiotics and prebiotics.</li> </ul>	<p>Conditions and control for bacterial growth:</p> <ul style="list-style-type: none"> <li>✓ The role of time, temperature, moisture and food availability.</li> </ul> <p>Growth conditions and control for mould growth and yeast production:</p> <ul style="list-style-type: none"> <li>✓ The role of time, temperature, moisture and food availability.</li> </ul> <p>Signs of food spoilage:</p> <ul style="list-style-type: none"> <li>✓ Natural decay, enzyme action and yeast production.</li> </ul> <p>Helpful properties of micro-organisms in food production:</p> <ul style="list-style-type: none"> <li>✓ Types of micro-organisms and key points.</li> </ul>	<p>Buying food:</p> <ul style="list-style-type: none"> <li>✓ Labelling and date marks.</li> <li>✓ Visual checks.</li> <li>✓ Reputable supplier.</li> </ul> <p>Storing food:</p> <ul style="list-style-type: none"> <li>✓ Types of storage and how to store foods correctly.</li> </ul> <p>Cooking and serving food:</p> <ul style="list-style-type: none"> <li>✓ High-risk foods, critical temperatures.</li> </ul>	<ul style="list-style-type: none"> <li>✓ The availability of food, the access to food, the individual's ability to utilise food.</li> <li>✓ Moral issues: how Fairtrade affects food producers and workers.</li> <li>✓ Ethical issues: relating to the development of genetically modified (GM) food.</li> </ul>	<ul style="list-style-type: none"> <li>✓ Environmental issues: food waste.</li> <li>✓ Carbon footprint and the transportation of materials and goods.</li> <li>✓ Sustainability of resources.</li> </ul>	<p>Features and characteristics of individual cuisines:</p> <ul style="list-style-type: none"> <li>✓ Recognise traditional ingredients: Chosen Culture 2.</li> <li>✓ Understand religious or cultural factors affecting the cuisine.</li> <li>✓ Understand traditional cooking methods, presentation and eating patterns.</li> <li>✓ Recognise how the traditional recipes have been adapted to suit today's society.</li> </ul>
<b>Science</b> 1 hour	Preservation: acid and sugar					

## Term 1

Task 1 based on theme from 1st September						
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
<b>Scientific investigations</b>	What is the task and how am I planning to complete this? Introduction/Plan (9 marks) Research Learners will show: - aim for the investigation choice of investigations with detailed explanations linking to the functional and chemical properties of the ingredients.	Investigation (21 marks) Scientific investigation into all of the functional and chemical properties of the commodity/ ingredients for the task How did I complete the task? Learners will show: - the method used for each investigation - the changes and adaptations made - logical sequence of working completed records of observations and findings (this may include charts, graphs, photos and written descriptions).	Produce a comprehensive analysis with a wide range of opinions and viewpoints. Evaluation of observations and findings.	Skills and presentation practice in preparation for Task 2.	Skills and presentation practice in preparation for Task 2.	Skills and presentation practice in preparation for Task 2.
Half Term						
Task 2 based on theme from 1st November						
	Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
	Skills and presentation practice in preparation for Task 2.	Skills and presentation practice in preparation for Task 2.	Plan: Reasons for selection- choice of dishes relating to the task.	Identification of skills and techniques.	Sensory/nutritional choice. Costs.	Food provenance and seasonality.

**Term 2**

Task 2					
Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Time plan.	Time plan.	Practice skills. Theory input.	Practice skills. Theory input.	Practice skills. Theory input.	Practice skills. Theory input.
Half Term					
Task 2					
Week 7	Week 8	Week 9	Week 10	Week 11	Week 12
Practice skills. Theory input: Presentation and portion control.	Practice skills. Theory input: Presentation and portion control.	Prepare, cook and present three dishes based on theme. Excellent and advanced application of a wide variety of skills, techniques and cooking methods, showing a high and very complex level of demand. Excellent level of competency when using a wide range of tools and equipment. Demonstrates excellent cooker management.		Analysis and evaluation: evidence of sensory testing.	Justification of choice. Improvements/modifications.

**Term 3**

Exam Revision					
Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
Half Term					
Exam Revision					
Week 7	Week 8	Week 9	Week 10	Week 11	Week 12



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