

## Year 10 and 11 Food Preparation and Nutrition Curriculum Rationale

To provide students with the knowledge, understanding and skills required to cook and apply the principles of food science, nutrition and healthy eating. To enable students to make connections between theory and practice to apply the understanding of food and nutrition to practical preparation. To develop a knowledge of various food and ingredients, to develop skills and processes while developing their practical skills. To prepare students for their NEA by completing a practice NEA 1 in Year 10.

Unit:	Core knowledge/skill development:	Sequence:	Assessment:	Literacy, numeracy, PSHE, FBV, other links	ACP and VAA development:	Home learning and enrichment
<b>Term 1 and 2 (14 weeks)</b>						
Food spoilage and contamination 4.1.1 & 4.1.4	Understand micro-organisms and enzymes and understand bacterial contamination.	Builds on skills taught in KS3.	Practical work assessed in terms of <b>practical quality only</b> , using GCSE specification grade descriptors.	Correct use of <b>subject specific terminology – ALL SECTIONS.</b>  Numeracy – weighing & measuring accurately	<b>REALISING –</b> <i>Automaticity</i> <i>Speed and accuracy</i> for all practical tasks	Ingredients for  Vegetable soup Chicken bites Quiche (shortcrust pastry) Pizza Pasta Lasagne
Principles of food safety 4.2.1 & 4.2.2	Understand how to buy and store food safely. Also prepare, cook and serve food safely.	Essential knowledge to use throughout the GCSE practical work – understand the basic expectations in practical lessons and developing knife skills.	3.1.1, 3.1.4, 3.2.1, 3.2.2 and 1.1.1-1.1.6 assessed using low-stakes quizzes and summative exam questions.			
Nutrition- Understand macronutrients and micronutrients.  <b>1.1.1 Protein</b>	<b>Protein –</b> Definition Functions in the body Sources of protein HBV Proteins LBV Proteins Protein complementation	Builds on basic skills taught in KS3 but teaches students more advanced functions and uses in the body.			<b>REALISING</b> <i>Automaticity</i> <i>Speed and accuracy</i> <b>LINKING</b> <i>Generalisation</i>	

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	Effects of deficiency and excess protein in the diet					
1.1.2 - Fats	<p><b>Fats</b>                      Definition of fat.                      Functions in the body.                      Main sources of fat in the diet.                      Effects of deficiency and excess of fat in the diet.                      Importance of reducing amount of saturated fat in our diets.</p>				<p><b>ANALYSING</b>  <i>Critical thinking</i>  <b>LINKING</b>  <i>Generalisation</i>  <i>Connection finding</i></p>	
1.1.3 Carbohydrates	<p>Carbohydrate –                      Definition                      Function in the diet                      Main sources of carbohydrate in diets: sugar – free / hidden, starch and NSP                      Effects of deficiency and excess                      Amount needed for everyday life.                      Importance of reducing free sugars in our diets.</p>	Builds on skills taught in KS3 but encourages further independence and confidence in the workshop. Emphasis on accuracy.			<p><b>REALISING</b>  <i>Automaticity</i>  <i>Speed and accuracy</i></p>	

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1.1.4 Vitamins  Water soluble B & C Fat soluble A, D, E & K	Vitamins – Understand the definition of water- and fat-soluble vitamins. Functions in the body. Sources in the body. Effect of deficiencies and excesses in the body. Daily dietary reference values needed.			Science / PE work.	<b>ANALYSING</b> <i>Critical thinking</i> <b>LINKING</b> <i>Generalisation</i> <i>Connection finding</i>	
1.1.5 Minerals	Minerals – Understand the definition of minerals. Functions in the body. Sources in the body. Effect of deficiencies and excesses in the body. Daily dietary reference values needed.				<b>REALISING</b> <i>Automaticity</i> <i>Speed and accuracy</i>	
1.1.6 Water	Water- Functions in the body Sources				<b>ANALYSING</b> <i>Critical thinking</i> <b>LINKING</b>	HL – Workbook completion

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	Excess and deficiency in the diet.				<i>Connection finding</i> <i>Generalisation</i>	
<b>Nutritional needs and health</b>  <b>1.2.1 Making informed food choices for a varied and balanced diet</b>	Understand the Eatwell guide and dietary guidelines. Know each segment of the Eatwell Guide, linked to the food groups and how much should be eaten. Understand how to plan balanced meals linked to portion size and costing. Plan meals based on different life stages, dietary intolerances, allergies, medical or health conditions.	Develop on knowledge learnt in KS3		SMSC -	<b>ANALYSING</b> <i>Critical thinking</i> <b>LINKING</b> <i>Generalisation</i> <i>Connection finding</i>	HL – Workbook completion
<b>1.2.2 – Energy Needs</b>	Functions of energy in the body. Main sources of energy in the diet. Effects and deficiencies of energy in the diet. Energy needed – BMR, PAL.	New content for students to learn.		SMSC – links with physical education and science.	<b>ANALYSING</b> <i>Critical thinking</i> <b>LINKING</b> <i>Generalisation</i> <i>Connection finding</i>	

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<p>1.2.3 – How to carry out nutritional analysis.</p> <p>1.2.4 – Diet, nutrition and health</p>	<p>Use a nutritional programme to calculate the nutritional information for various recipes. Understand the relationship between diet, nutrition and health – links to obesity, cardiovascular disease, skeletal disease, iron deficiency anaemia and Type 2 diabetes.</p>	<p>Completely new skill for students.</p>		<p>Numeracy – ability to analyse nutritional content.</p> <p>Links with PE and Science</p>	<p><b>CREATING</b> <i>Fluent thinking to create new dishes to analyse the nutritional content.</i></p> <p><b>REALISING</b> <i>Automaticity</i> <i>Speed and accuracy</i></p>	
<p><b>Terms 3 and 4 (12 weeks)</b></p>						
<p>3.2 – Functional and chemical properties of food</p> <p>3.2.1 Protein</p>	<p>The scientific principle underlying - Protein denaturation. Protein coagulation. Gluten formation. How foams are formed. when preparing and cooking food. The working characteristics,</p>	<p>Taught to illustrate to the students the importance of science within food and support NEA 1.</p>	<p>All areas assessed using the exam board specification.</p> <p>3.2 assessed using low-stakes quizzes and summative exam questions.</p>	<p>SMSC – considering the science of food</p>	<p><b>META-THINKING</b> <b>ANALYSING</b> <i>Critical thinking</i> <i>Complex problem solving</i></p> <p><b>LINKING</b> <i>Generalisation</i> <i>Connection finding</i> <i>Seeing alternative perspectives</i></p> <p><b>EMPATHY</b></p>	

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	functional and chemical properties of protein.					
3.2.2 Carbohydrates	Understand the scientific principles underlying the processes of gelatinisation, dextrinisation and caramelisation, when preparing and cooking food. The working characteristics, functional and chemical properties of carbohydrates.	Students will use what they have learnt in Term 1 – 1.1 to improve their understanding of how cooking nutrients links to science.			<b>LINKING</b> <i>Generalisation</i> <i>Connection finding</i> <i>Seeing alternative perspectives</i> <b>EMPATHY</b> <b>AGILE</b>	
3.2.3 Fats and Oils	The scientific principles underlying the processes of shortening, aeration, plasticity and emulsification when preparing and cooking food.				<b>CREATING</b> <b>REALISING</b> <i>Automaticity</i> <i>Speed and accuracy</i> <b>AGILE</b>	
3.2.4 Fruit and vegetables	The scientific principles underlying the processes of enzymic browning				<b>CREATING</b> <b>REALISING</b> <i>Automaticity</i> <i>Speed and accuracy</i>	

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	and oxidation when preparing and cooking food.				AGILE	
3.2.5 Raising agents	<p>The scientific principles underlying the processes of raising agents:</p> <p><b>chemical</b> (baking powder, bicarbonate of soda, self-raising flours which produce carbon dioxide)</p> <p><b>Mechanical</b> (whisking, beating, folding, sieving, creaming and rubbing-in – all incorporate air into the mixture)</p> <p><b>Steam</b> is produced when the water in any moist mixture reaches boiling point.</p> <p><b>Biological</b> (steam)</p>	New content			<p>META-THINKING</p> <p><b>ANALYSING</b></p> <p><i>Critical thinking</i></p> <p><i>Complex problem solving</i></p> <p><b>LINKING</b></p> <p><i>Generalisation</i></p> <p><i>Connection finding</i></p> <p><i>Imagination</i></p> <p><i>Seeing alternative perspectives</i></p> <p><b>EMPATHY</b></p>	
4.1 Food spoilage and contamination 4.1.2 The signs of food spoilage	<p>Recap work from September.</p> <p>Micro-organisms and enzymes and the signs of food spoilage.</p>				<p><b>REALISING</b></p> <p><i>Automaticity</i></p> <p><i>Speed and accuracy</i></p>	

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<p>4.1.3 Microorganisms in food production</p> <p>Cooking of Food and Heat Transfer 3.1.1 Why food is cooked and how heat is transferred to food</p>	<p>moulds in the production of blue cheese</p> <ul style="list-style-type: none"> <li>• yeasts to raise bread</li> <li>• bacteria in yoghurt and cheese production.</li> </ul> <p>The reasons why food is cooked and the different methods of heat transfer.</p> <p>Food is cooked to:</p> <ul style="list-style-type: none"> <li>• make food safe to eat</li> <li>• develop flavours • improve texture • improve shelf life</li> <li>• give variety in the diet. How preparation and cooking affect the appearance, colour, flavour, texture, smell and overall palatability of food. How heat is</li> </ul>		<p>All areas assessed using the exam board specification.</p> <p>4.1 assessed using low-stakes quizzes and summative exam questions.</p>			



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3.1.2 Selecting appropriate cooking methods	<p>transferred to food through:</p> <ul style="list-style-type: none"> <li>• conduction</li> <li>• convection</li> <li>• radiation.</li> </ul> <p>Selection of appropriate preparation, cooking methods and times to achieve desired characteristics.</p> <ul style="list-style-type: none"> <li>• how the selection of appropriate preparation and cooking methods can conserve or modify nutritive value or improve palatability:</li> <li>• water based: steaming, boiling, simmering, blanching, poaching, braising</li> <li>• dry methods: baking, roasting, grilling, dry frying</li> <li>• fat based: shallow frying, stir fry</li> </ul>					

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	<ul style="list-style-type: none"> <li>• how preparation and cooking affect the appearance, colour, flavour, texture, smell and overall palatability of food eg the use of marinades to denature protein.</li> </ul>					
Term 5 & 6 ( weeks)						
MOCK NEA 1	Students to practise working through the NEA 1 by completing all sections. Section A – <b>Research</b> 6 marks Section B - <b>Investigation</b> 15 marks Section C - <b>Analysis &amp; Evaluation</b> 9 marks.			Literacy – extended analysis and writing tasks	META-THINKING <b>ANALYSING</b> <i>Critical thinking</i> <b>LINKING</b> <i>Generalisation</i> <i>Imagination</i>	
4.3.1 Sensory Analysis	Sensory testing methods and how taste receptors and olfactory systems			SMSC – environmental and social concerns	META-THINKING <b>ANALYSING</b> <i>Critical thinking</i> <b>LINKING</b> <i>Generalisation</i>	

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	<p>work when tasting food.</p> <p>Importance of senses when making food choices: sight, taste, touch and aroma</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> <li>• how to set up a taste panel</li> <li>• controlled conditions required for sensory testing</li> <li>• evaluating how senses guide</li> <li>• evaluating a wide range of ingredients and food from Britain and other countries</li> <li>• how to test sensory qualities of a wide range of foods and combinations.</li> </ul>		<p>All areas are assessed formatively and frequently using low-stakes quizzes, and using summative exam questions after each section is complete – 4.3</p>	<p><b>Correct use of subject-specific terminology in ALL AREAS</b></p>	<p><i>Connection finding</i> <b>EMPATHY</b></p>	

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<b>4.2.1 British and International Cuisine</b>	Students to understand British and 2 other cuisines - distinctive features and characteristics of cooking <ul style="list-style-type: none"> <li>• equipment and cooking methods used</li> <li>• eating patterns</li> <li>• presentation styles</li> <li>• traditional and modern variations of recipes.</li> </ul>				META-THINKING <b>ANALYSING</b> <i>Critical thinking</i> <i>Complex problem solving</i> <b>LINKING</b> <i>Generalisation</i> <i>Connection finding</i>	
Exam preparation						