

## Curriculum Map: GCSE Food Preparation and Nutrition Year 10

	Autumn	Spring	Summer
<p><b>Content</b> Declarative knowledge 'I Know'</p> <p>The GCSE Food Preparation and Nutrition is an exciting and creative course which focuses on practical cooking skills to ensure students develop a thorough understanding of nutrition, food provenance and the working characteristics of food materials. At its heart, this qualification focuses on nurturing students' practical cookery skills to give them a strong understanding of nutrition.</p> <p>The exam and non-exam assessment (NEA) will measure how students have achieved the following assessment objectives.</p> <p>AO1: Demonstrate knowledge and understanding of nutrition, food, cooking and preparation.</p>	<p>The course teaches students the knowledge, understanding and skills required to cook and apply the principles of food science, nutrition, and healthy eating.</p> <p>Much of the course is delivered through preparation and making activities. Students need to make the connections between theory and practice to apply their understanding of food and nutrition to practical preparation.</p> <p>Topics and themes are: 1. Food, nutrition, and health 2. Food science 3. Food safety 4. Food choice 5. Food provenance.</p> <p>The students in year 10 will build upon and apply previous learning from KS3 and Year 9. The course includes the food investigation task, the food preparation task, demonstrating a wide range of practical skills in the Non- Exam Assessment (NEA) and revision topics for the final written exam.</p> <p>The final written paper will assess their theoretical knowledge and understanding of the subject content of the course. Students will be taught a wide range of food preparation skills which have been integrated throughout the Year 9, 10 and 11 schemes of work and linked where appropriate to the subject content.</p> <p>In the NEA, students must use and apply a variety of food preparation skills to achieve a range of different outcomes. The choice of recipes to demonstrate the skills will be at the discretion of the school and the individual.</p>	<p>Students learn about the scientific principles, the functional and chemical properties of food- Protein, Carbohydrate, and Fats and oils: They learn this theoretically and then carry out a selection of investigations and practicals to underpin this learning.</p> <p>They cover protein denaturation, coagulation, shortening, aeration, plasticity, and emulsification. The scientific principles underlying these processes when preparing and cooking food the working characteristics, functional and chemical properties of Fats and oils.</p> <p>Students must know and understand and suggest how to apply food preparation skills with denaturing, coagulation, shortening, aeration, plasticity, and emulsification.</p> <p>Students must understand Primary and secondary stages of processing and production. How this processing affects the sensory and nutritional properties of ingredients.</p> <p>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>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)</p> <p>The loss of vitamins through heating and drying the effect of heating and drying on the sensory characteristics of milk.</p> <p>Microorganisms and enzymes: students need to know the growth conditions for microorganisms and enzymes and the control of food spoilage</p>	<p>Sensory evaluation. Students will participate in some different sensory testing methods and learn how taste receptors and olfactory systems work when tasting food.</p> <p>During the first part of the term students practise some of the higher-level practical skills they have learnt over the course. The Food preparation skills consist of twelve skill groups have been integrated throughout the course through practical activities. Students must know how and when these food preparation skills can be applied and combined to achieve specific outcomes.</p> <p>They then have the opportunity to complete a <i>Mock of the NEA2 Task</i>, including a 3-hour practical (achieved in one single 3 hour session for candidates to produce their final 3 dishes. This allows the other hours for the completion of the research, planning, trialling, and evaluation of the final menu, to be completed in sessions timetabled at school.</p> <p>The skills students require, are to consider the influence of lifestyle and consumer choice when developing meals and recipes. Consider nutritional needs and food choices when selecting recipes, including when making decisions about the ingredients, processes, cooking methods and portion sizes. Develop the ability to review and make improvements to recipes by amending them to include the most appropriate ingredients, processes, cooking methods and portion sizes. Manage the time and cost of recipes effectively, use their testing and sensory evaluation skills, adjusting where needed, to</p>

<p>AO2: Apply knowledge and understanding of nutrition, food, cooking and preparation.</p> <p>AO3: Plan, prepare, cook, and present dishes, combining appropriate techniques.</p> <p>AO4: Analyse and evaluate different aspects of nutrition, food, cooking, and preparation including food made by themselves and others.</p>	<p>In year 10 the focus will be on the Functional and chemical properties of food. Students must know and understand how proteins, carbohydrates and fats react to food preparation processes and cooking methods. This term they look at the gelatinisation, dextrinisation, caramelisation processes. Understanding the scientific principles underlying these processes when preparing and cooking food and the working characteristics, functional and chemical properties of carbohydrates.</p> <p>Students must know and understand chemical (baking powder, bicarbonate of soda, self-raising flours which produce carbon dioxide) The 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. Plus, biological raising agents (yeast).</p> <p>Understanding the scientific principles underlying these processes when preparing and cooking food and the working characteristics, functional and chemical properties of raising agents.</p> <p>This term will focus on food choice linked to food intolerances (gluten and lactose) and making dishes healthier i.e.: reduced fat, sugar, salt. Students selected, modify, and made a recipe for a different dietary group.</p> <p>Students must know and understand 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 e.g buy one</p>	<p>bacteria, yeasts, and moulds are microorganisms, high risk foods, enzymes are biological catalysts usually made from protein. The growth conditions for microorganisms: role of temperature, moisture, food and time, the control of microorganism growth: temperature control, pH, water availability</p> <p>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. The control of enzymic action: blanching of vegetables before freezing, use of acids to prevent enzymic browning.</p> <p>The use of microorganisms in food production plus bacterial contamination: knowing the different sources of bacterial contamination.</p> <p>The main types of bacteria which cause food poisoning the main sources and methods of control of different food poisoning bacterium types, and their general symptoms.</p> <p>Technological developments to support better health and food production including fortification and modified foods with health benefits and the efficacy of these are taught. Considering: cholesterol lowering spreads, and the health benefits of fortification. Fortified foods: vitamins and minerals added to breakfast cereals, and low-fat spreads.</p> <p>Students learn the positive and negative aspects of the use of additives: colourings, emulsifiers and stabilisers, flavourings, and preservatives in food, plus the positive and negative aspects of Genetically Modified (GM) foods.</p> <p>Students must know and understand all the factors which may influence food choice, in relation to: physical activity level (PAL), celebration/occasion, cost of food, enjoyment, food availability, healthy eating, income, lifestyle, seasonality, time of day, time available to prepare/cook. Students must be able to cost recipes and make modifications.</p>	<p>improve the recipe during the preparation and cooking process</p> <p>explain, justify, and present their ideas about their chosen cooking methods to others. Make decisions about which techniques are appropriate based on their understanding of nutrition, food, different culinary traditions and cooking and food preparation content to achieve their intended outcome. They should be able to carry out these techniques safely and combine them into appealing meals whilst evaluating the results.</p> <p>Student will complete a written Mock, so exam technique and certain topics will be covered and re-capped.</p>
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	<p>get one free, special offer, meal deals, media influences, advertising, point of sales marketing.</p>	<p>Food choice is also linked to different religions and cultures. To ethical and moral beliefs: animal welfare, Fairtrade, local produce, organic, Genetically Modified (GM) foods, food intolerances (gluten and lactose) and the following allergies: nuts, egg, milk, wheat, fish, and shellfish.</p> <p>When selecting some recipes students should explain and justify their reasons for choice. Select, modify, and make recipes for different religions, cultures, and dietary groups.</p> <p>During this term the students will also get the opportunity to carry out a <i>Mock NEA1 (The Food investigation assessment)</i></p> <p>Students will investigate the working characteristics and the functional and chemical properties of a particular ingredient through practical investigation. They will produce a report which will include research into 'how ingredients work and why'. More detailed information on this can be obtained from the specification or textbook.</p>	
<p><b>Skills</b> Procedural Knowledge 'I know how to'</p>	<p>For the students to demonstrate their understanding of the following term: gelatinisation, dextrinisation, caramelisation. Also showing their understanding the scientific principles underlying these processes when preparing and cooking food and the working characteristics, functional and chemical properties of carbohydrates, they carried out various practicals to demonstrate their understanding of how sauces thicken. They make a blended white sauce showing starch gelatinisation such as either a roux or all-in-one blended sauce, infused sauce, velouté or béchamel to demonstrate how liquid/starch ratios affect viscosity. They demonstrate how conduction and convection work to cook the sauce and the need for agitation.</p>	<p>The students demonstrate how acids denature protein and marinades add flavour and moisture when preparing vegetables, meat, fish, and alternatives. The setting of egg mixtures e.g in quiche. The use of whisking eggs to produce a gas-in-liquid foam e.g whisked sponge.</p> <p>They demonstrate these processes in practical cookery skills: Shortening and plasticity, lamination e.g pastry making. Aeration e.g using the creaming method with a food mixer for a cake. Make an emulsion sauce such as a salad dressing, mayonnaise or hollandaise.</p> <p>Secondary processing: This theory is linked to experimental work and practical cookery skills of making cheese, yogurt, and jam products.</p>	<p>The students need to understand and apply the 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. They will set up some tasting panels, and understand the controlled conditions required for sensory testing. They will evaluate how senses can be used to evaluate a wide range of ingredients and food from Britain and other countries, and how to test sensory qualities of a wide range of foods and combinations through the whole course. They will achieve this by: General practical skills – judge and manipulate sensory properties. Taste and season during the</p>

	<p>Students must demonstrate that they know and understand how raising agents work, chemical (baking powder, bicarbonate of soda, self-raising flours which produce carbon dioxide) work. The 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. Plus, biological raising agents (yeast).</p> <p>They will have the opportunity to show their understanding of the scientific principles underlying these processes when preparing and cooking food and the working characteristics, functional and chemical properties of raising agents. Practical dishes will be completed using chemical raising agents such as self-raising flour, baking powder, bicarbonate of soda and cream of tartar. Using steam in a mixture to raise choux pastry or batter. Using egg as a raising agent to: make a savoury roulade/ Swiss roll.</p> <p>Students will a chilled layered dessert and explained and justify their reasons for choice. The dish they chose they will analysis and record how they could modify the recipes for different dietary groups.</p> <p>Students must be able to interpret, understand how information about food available to the consumer, including labelling and marketing, influences food choice. They must also know which mandatory information is included on food packaging in accordance with current European Union and Food Standards Agency (FSA) legislation. The non-mandatory information: provenance, serving suggestions. How to interpret nutritional labelling, how food marketing can influence food choice e.g buy one get one free, special offer, meal deals, media influences, advertising, point of sales marketing. This knowledge will allow them to make sensible,</p>	<p>Microorganisms and enzymes: practical lessons include Water based methods using the hob – blanching of vegetables to demonstrate the destruction of enzymes in foods. Oxidation – e.g preventing water soluble vitamin loss when preparing and cooking vegetables Preparing fruit and vegetables to control enzymic browning. Preparing fruit and vegetables which sustain yeast and mould growth. Making cheese, yogurt, and jam products.</p> <p>Students carry out sensory analysis and evaluate existing products that have been modified and fortified and develop their own dish to consider this nutritional aspect.</p> <p><i>Mock NEA1 (The Food investigation assessment)</i> <i>Students establish investigative skills throughout the course and are guided towards appropriate research areas in preparation for Task 1.</i> <i>Students carry out research into the ingredients to be investigated. The research will demonstrate how ingredients work and why. The outcome of the research should clearly inform the nature of the practical investigation and be used to establish a hypothesis or prediction for the food investigation task.</i> <i>Students carry out practical investigations, related to the hypothesis or prediction, which demonstrate understanding of how ingredients work and why.</i> <i>Students will analyse and evaluate the results of the investigation and reflect upon their findings.</i> <i>Explanations will demonstrate how the results can be applied in practical food preparation and cooking.</i> <i>Students record the results of the practical investigation.</i></p>	<p>cooking process. Change the taste and aroma using infusions, herbs, and spices, paste, jus and reduction. Test sensory qualities of a wide range of foods. Evaluate and apply the results of sensory testing.</p> <p>Students prepare cook and serve numerous dishes in this term, as practise and for the completion of their NEA2. In this task, students will prepare, cook, and present a final menu of three dishes to meet the needs of a specific context. Students must select appropriate technical skills and processes and create 3–4 dishes to showcase their skills. They will then produce their final menu and plan how this will be achieved.</p> <p>Students must work independently e.g making their own judgements about cooking methods and making changes to recipes to improve palatability.</p> <p>Students must work safely and hygienically and always adhere to food safety principles throughout the assessment. Students will apply their knowledge of food safety principles within the planning for the 3-hour assessment. The application of food safety principles will be credited and assessed when making the final dishes.</p> <p>The outcome of the NEA 2 is a: Written or electronic portfolio including photographic evidence authenticating the practical outcomes. Students will produce a concise portfolio. Students will prepare, cook, and present a final menu of three dishes within a single period of no more than 3 hours, planning how this will be achieved. On completion of the making of the final dishes, students will analyse and evaluate the</p>
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	<p>healthy choices of food and food related products.</p>		<p>outcomes through sensory testing, nutritional analysis, costing and identify improvements to their dishes. The portfolio is not to exceed 20 sides of A4 or A3 equivalent. A menu is a selection of three dishes that are produced to meet the demands of the chosen task.</p> <p>Students create practical outcomes and demonstrate the technical skills listed in Food preparation skills. Students create, plan, prepare, cook, and present a three-dish menu to meet the needs of their chosen task and allow them to showcase their food preparation skills. Two assessment tasks, give students the opportunity to gain marks for demonstrating their food preparation skills – 'demonstrating technical skills' and 'making the final dishes'.</p> <p>Excellent performance is characterised by demonstrating a complex skill to an excellent standard. In many instances, what constitutes a 'complex' skill will be determined in part by the ingredients used, processes and techniques carried out, and the dish selected by the student. The complexity and challenge of the dishes is linked to the skills involved in producing the dishes. The more complex the skills, the higher the level of demand. To provide greater clarification, the table below provides dishes that could be considered complex, medium demand and basic skill level in the context of three of the skill groups in this specification</p>
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<p><b>Strategies</b> Conditional Knowledge 'I know when to'</p>	<p>The students need to apply their understanding and knowledge of these following terms: gelatinisation, dextrinisation, caramelisation. They can show their understanding of the scientific principles underlying these processes when preparing and cooking food and the working characteristics, functional and chemical properties of carbohydrates, when they carried out various practicals to demonstrate their understanding of how sauces thicken. They make a blended white sauce showing starch gelatinisation such as either a roux or all-in-one blended sauce, infused sauce, velouté or béchamel to demonstrate how liquid/starch ratios affect viscosity. They demonstrate how conduction and convection work to cook the sauce and the need for agitation.</p> <p>Students must demonstrate that they know and understand how raising agents work, chemical (baking powder, bicarbonate of soda, self-raising flours which produce carbon dioxide) work. The 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. Plus, biological raising agents (yeast).</p> <p>They will have the opportunity to show their understanding of the scientific principles underlying these processes when preparing and cooking food and the working characteristics, functional and chemical properties of raising agents. Practical dishes will be completed using chemical raising agents such as self-raising flour, baking powder, bicarbonate of soda and cream of tartar. Using steam in a mixture to raise choux pastry or batter. Using egg as a raising agent to: make a savoury roulade/ Swiss roll.</p> <p>Students will prepare a chilled layered dessert and explained and justify their reasons for their</p>	<p>The students must know and understand the suggested application and food preparation skills to understand aeration, plasticity emulsification and shortening. They need to understand when to use these processes: how acids denature protein and marinades add flavour and moisture when preparing vegetables, meat, fish, and alternatives. The setting of egg mixtures e.g in quiche. The use of whisking eggs to produce a gas-in-liquid foam e.g whisked sponge.</p> <p>Microorganisms: students need to understand the implications of the growing conditions for microorganisms: role of temperature, moisture, food, and time. They need to be able to control the growth of microorganism growth: temperature control, pH, water availability. Identify what are 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 control of enzymic action: blanching of vegetables before freezing, use of acids to prevent enzymic browning.</p> <p>Students understand the use of Microorganisms in food production: e.g., moulds in the production of blue cheese, yeasts to raise bread and bacteria in yoghurt and cheese production.</p> <p>Students must know and understand factors which may influence food choice when they select recipes, or dishes. They must explain and justify their reasons for choice, when preparing recipes and meals considering lifestyle, consumer choice, culture, medical conditions etc.</p> <p>When they plan recipes and dishes, they also carry out costing of the dish and modifications where necessary.</p> <p>Mock NEA1 (The Food investigation assessment) Students will analyse and evaluate the results of the investigation and reflect upon their findings. Explanations will demonstrate how the results can be</p>	<p>The students need to understand and apply the importance of senses when making food choices: sight, taste, touch, and aroma. They must judge and manipulate sensory properties. Taste and season during the cooking process. Change the taste and aroma using infusions, herbs, and spices, paste, jus and reduction. They will test the sensory qualities of a wide range of foods and evaluate and apply the results of sensory testing.</p> <p>Students will achieve the following assessment objectives when completing their practical NEA2 Mock. They will demonstrate their knowledge and understanding of nutrition, food, cooking and preparation in the dishes they choose to plan, prepare, cook, and present. They will apply their knowledge and understanding of nutrition, food, cooking and preparation in the task as they produce a concise portfolio (not exceeding 20 A4 sides or A3 equivalent). They will need to plan, prepare, cook, and present dishes, combining appropriate techniques for this practical task, demonstrating their knowledge, and applying it.</p> <p>In the last section of the NEA2 students analyse and evaluate different aspects of nutrition, food, cooking, and preparation including food made by themselves and others.</p> <p>Students create practical outcomes and demonstrate the technical skills listed in Food preparation skills. Students know how to create, plan, prepare, cook, and present a three-dish menu to meet the needs of their chosen task and allow them to showcase their food preparation skills. Two assessment</p>
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	<p>choice. They will analysis and record how they could modify the recipes for different dietary groups.</p> <p>Students must be able to apply their knowledge and understanding of how information about food available to the consumer, including labelling and marketing, influences food choice. They must apply their knowledge of mandatory information is included on food packaging in accordance with current European Union and Food Standards Agency (FSA) legislation. The non-mandatory information: provenance, serving suggestions, when they read labels. They need to know when to interpret nutritional labelling, how food marketing can influence food choice e.g buy one get one free, special offer, meal deals, media influences, advertising, point of sales marketing. This knowledge will allow them to make sensible, healthy choices of food and food related products.</p>	<p>applied in practical food preparation and cooking and their overall understanding of the Task.</p>	<p>criteria give students the opportunity to gain marks for demonstrating their food preparation skills – 'demonstrating technical skills' and 'making the final dishes'.</p> <p>The outcome of the NEA 2 is a: Written or electronic portfolio including photographic evidence authenticating the practical outcomes of the individual student. Photographic evidence of the three final dishes must be included.</p>
Key Questions	<p>What mandatory information is found on a food label?</p> <p>Which raising agent shall I use in my recipe?</p> <p>How can I alter the viscosity of my sauce?</p>	<p>Which type of bacteria could cause food poisoning?</p> <p>Which food investigations shall I carry out for my NEA1 task?</p>	<p>Which dishes can I produce that showcase high skills?</p>
Assessment topics	<p>Practical assessment – producing a dish using a sauce demonstrating gelatinization.</p> <p>Theory test on sauces and raising agents.</p>	<p>Theory test- functional properties of Proteins, Carbohydrates, and Fats and oils.</p> <p>Mock NEA1</p>	<p>Mock NEA2</p> <p>Exam papers/ exam questions</p>
Cross curricular links/Character Education	<p>Science: Functional and chemical properties of sauces – gelatinisation. Chemical raising agents.</p> <p>English: descriptive adjectives of sensory analysis and evaluation, analysis of information, explanation, and justification skills, interpreting data.</p> <p>Maths: Measurement, Ratio/Fractions/ analysing nutritional data.</p> <p>PE: Eatwell Guide and Diets, Macronutrients &amp; Micronutrients.</p> <p>Art and Design: Presentation and decoration.</p>	<p>Science: Functional and chemical properties of Protein, Carbohydrates, Fats, and oils. Bacteria/ enzymes / growing conditions for these.</p> <p>English: producing a report for the NEA1- research skills, evaluation, analytical skills, interpreting data.</p> <p>Maths: measurement, ratio/ fractions.</p> <p>PE: Macronutrients &amp; Micronutrients.</p> <p>Art and design: A range of appropriate testing methods annotated photographs, labelled diagrams, tables, charts, sensory testing methods, viscosity tests.</p>	<p>Science: Functional and chemical properties of the ingredients used in the NEA2 task.</p> <p>English: descriptive adjectives of sensory analysis and evaluation, analysis of information, explanation, and justification skills, interpreting data.</p> <p>Maths: Measurement/Ratio/Fractions/ Analysing nutritional data.</p> <p>PE: Eatwell Guide and Diets, Macronutrients &amp; Micronutrients.</p> <p>Art and Design: Presentation and decoration/ photographs/ charts/tables.</p>