# Curriculum Map
## Year 10

# Food Preparation & Nutrition

***Learning Aims and Curriculum Intent:***

This curriculum encompasses a range of topics, ensuring students develop practical skills, theoretical knowledge, and a deeper appreciation for the role of food in their lives. Our intent is to empower Year 10 students with the knowledge and skills to make informed, healthy, and sustainable food choices. Through a balanced blend of theory and practical experience, students will develop a lifelong understanding of the relationship between nutrition, culinary practices, and overall wellbeing. This curriculum prepares students for future endeavours in the culinary arts, nutrition, and promotes a holistic approach to food that extends beyond the classroom.

| Term | Content, Key Questions and Knowledge | Skills | Assessment |
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| Michaelmas | **Introduction**<br>The introduction serves as a foundation, inspiring students to delve into the world of food with enthusiasm and a sense of purpose. It lays the groundwork for a comprehensive exploration of food preparation and nutrition throughout the course. | Enthusiasm and Engagement: Develop an eagerness to explore the world of food.<br>Critical Thinking: Understand the foundational role of the introduction in framing the course. | Retrieval quizzes to build knowledge acquisition and understanding. |
| | **Nutrition program**<br>The fundamentals of nutrition, emphasizing the impact of balanced diets on overall health and wellbeing. | Analytical Thinking: Grasp the fundamental principles of nutrition.<br>Application: Apply knowledge to assess the impact of diets on health. | Individual task: pupils conduct individual investigation activities on various recipes using the nutrition program. |
| | **Sensory or organoleptic properties of food**<br>The sensory aspects of food, including taste, texture, and aroma, to develop an appreciation for the quality of ingredients. | Observation: Develop acute sensory observation skills.<br>Communication: Articulate preferences and sensory experiences. | |
| | **Preferential and sensory testing**<br>Engage in practical activities to evaluate food preferences and conduct sensory tests, honing the ability to discern flavours and textures. | Data Analysis: Interpret preferences from sensory tests.<br>Decision Making: Make informed choices based on sensory evaluations. | Group oracy task: pupils conduct a group presentation on sensory properties of different food and present their observation. |
| | **Food safety**<br>The principles of food safety, covering hygiene practices, cross-contamination prevention, and the importance of safe food handling. | Hygiene Practices: Develop practical hygiene habits.<br>Risk Management: Understand and mitigate food safety risks. | |
| | **Storing, preparing, cooking, and serving food**<br>Practical skills in handling, preparing, and cooking food while understanding the significance of proper storage and presentation. | Technical Proficiency: Master practical culinary skills.<br>Presentation: Learn the art of food presentation. | Assessment Test: Based on sensory analysis and food safety. |
| | **Reasons why food is cooked and heat transfer**<br>The science of cooking, exploring the reasons behind various cooking methods and the principles of heat transfer. | Scientific Inquiry: Understand the science behind cooking methods.<br>Problem Solving: Apply heat transfer principles to cooking challenges. | Retrieval quizzes to build knowledge acquisition and understanding. |
| | **Carbohydrates** – gelatinisation, dextrinisation and caramelisation<br>The key nutritional components of carbohydrates, exploring processes like gelatinisation, dextrinisation and caramelisation. | Chemical Understanding: Grasp the chemical transformations in carbohydrates.<br>Culinary Creativity: Apply different processes to achieve desired textures and flavours. | Individual task: pupils conduct individual investigation activities on various recipes using the nutrition program. |
| | **Fats**<br>The key nutritional components of fats exploring processes like shortening, plasticity, rancidity, aeration and trans-fat formation. | Application of fats to create tender and crumbly textures in baked goods.<br>Incorporation of solid fats for shortening effects in recipes. | |
| | **Protein –** coagulation, foam formation and denaturation<br>The key nutritional components of proteins, exploring processes like coagulation, foam formation, and denaturation. | Biological Understanding: Understand protein transformation during cooking.<br>Creative Application: Apply protein processes to diverse recipes. | Group oracy task: pupils conduct a group presentation on sensory properties of different food and present their observation. |
| | **Enzymic browning**<br>Enzymic browning as a natural chemical reaction that occurs when certain enzymes, like polyphenol oxidase, come into contact with oxygen in the presence of phenolic compounds.<br><br>Identify the factors that initiate enzymic browning, including cutting or bruising fruits and vegetables, exposing them to air, and disrupting cellular structures.<br><br>Breakdown of the chemical reaction involved in enzymic browning:<br>Polyphenols + Oxygen → Quinones<br>Quinones → Browning pigments (melanin) | Chemical Analysis: Grasp the chemical reactions in enzymic browning.<br>Prevention Strategies: Understand how to control enzymic browning in cooking. | Retrieval quizzes to build knowledge acquisition and understanding. |

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| | **Meat –** structure, tenderising, rearing and<br>The structure of meat, methods of tenderizing, rearing practices, and explore protein complementation and alternative protein sources. | Culinary Techniques: Learn methods of tenderizing and cooking meat.<br>Ethical Awareness: Understand the impact of rearing practices on meat quality. | |
| | **Protein complementation**<br>The structure of meat, methods of tenderizing, rearing practices, and explore protein complementation and alternative protein sources. | Nutritional Planning: Understand how to create nutritionally balanced meals.<br>Cooking Creativity: Explore diverse protein sources for complementation. | Retrieval quizzes to build knowledge acquisition and understanding.<br><br>Individual task<br><br>Group oracy task<br><br>Formative assessment |
| | **Protein alternatives**<br>Understanding the concept of protein complementation to ensure a well-rounded amino acid profile in plant-based diets.<br>Creating meals that combine different plant-based protein sources for optimal nutrition. | Plant-Based Cooking: Explore cooking with alternative protein sources.<br>Balanced Nutrition: Understand how to achieve balanced nutrition in plant-based diets. | |
| | **Eggs**<br>Examine the versatility of eggs in cooking, covering their role in various dishes and culinary techniques. | Versatility: Understand the versatility of eggs in cooking.<br>Culinary Techniques: Master various egg-related culinary techniques. | |
| | **Food provenance processing and production**<br>Understand the journey of food from its origin to processing and production, emphasizing sustainable and ethical practices. | Sustainability Awareness: Understand the journey of food from source to table.<br>Ethical Considerations: Consider sustainable and ethical food production practices. | |
| | **Raising agents –** yeast chemical agents<br>The role of raising agents in the culinary world, focusing on biological/natural (yeast), mechanical, steam and chemical raising agents.<br>The science behind leavening and how these agents contribute to the texture and structure of various baked goods. | Chemical Understanding: Grasp the science behind leavening agents.<br>Culinary Techniques: Apply various raising agents to achieve desired textures. | |
| **Lent** | **The main commodity groups**<br>The importance of a diverse diet incorporating various commodity groups.<br>The significance of balancing protein, carbohydrates, fats, vitamins, and minerals for overall health.<br>Awareness of sustainable and ethical sourcing in food choices.<br>Develop practical cooking skills and techniques for each commodity group. | Develop the ability to comprehend the roles of proteins, carbohydrates, fats, vitamins, and minerals in maintaining overall health.<br>Acquire the skill to plan and create well-balanced meals that incorporate a variety of commodity groups, ensuring optimal nutritional intake. | |
| | **The eight tips for Healthy Eating and health**<br>Provide a foundation for understanding the nutritional benefits of each tip.<br>Develop hands-on skills to implement these tips in everyday cooking.<br>Emphasise the long-term health benefits of adopting these practices. | To demonstrate an understanding of the government's guidelines for a healthy diet<br>To understand what a balanced diet is<br>To understand the '8 Tips for Eating Well' (Food Standards Agency) as a way of helping consumers achieve a healthy and well-balanced diet | Retrieval quizzes to build knowledge acquisition and understanding.<br><br>Individual task<br><br>Group oracy task |
| | **Major diet related issues caused by poor diet and lifestyle**<br>Analyse major diet-related health issues, including obesity, cardiovascular disease (CVD), coronary heart disease (CHD), and high blood pressure.<br><br>**Obesity, CVD and CHD, High blood pressure**<br>Develop an understanding of how dietary choices impact health outcomes and acquire practical skills to make informed decisions in their future eating habits. | To recap on the major diet-related health issues caused by poor diet and lifestyle.<br>To complete an exam question based on diet related health issues | |
| | **Dish high in Calcium or iron for a vegetarian**<br>Calcium: Spinach, chickpeas, and quinoa contribute to the calcium content, supporting bone health.<br>Iron: Spinach and chickpeas are excellent sources of iron, essential for maintaining healthy blood. | Apply the understanding that these ingredients contribute to the calcium content of the dish, supporting bone health.<br>Understand the importance of iron for maintaining healthy blood and incorporate these ingredients into a dish to meet iron needs. | |
| | **Nutritional and dietary needs of different groups of people**<br>Explore the nutritional requirements for different demographics, celiac disease and lactose intolerance, and the difference between food intolerance and a food allergy.<br>Individuals with Specific Health Conditions (e.g., Diabetes, Hypertension)<br>Vegetarians and Vegans<br>Pregnant and Breastfeeding Women<br>Athletes and Active Individuals<br>Elderly Individuals | To explain the nutritional and dietary needs of different groups of people at different stages in their lives<br>To describe food allergies and intolerances<br>To link dietary reference values with current dietary guidelines | Retrieval quizzes to build knowledge acquisition and understanding.<br>Individual task<br><br>Group oracy task<br><br>Formative assessment |
| | **Energy balance**<br>The relationship between the calories consumed through food and beverages and the calories expended through physical activity and metabolism.<br>Understanding energy balance is crucial for maintaining a healthy weight and overall well-being.<br>Meals that provide sustained energy without excess calories.<br>Discussion about portion sizes and mindful eating. | To understand the relationship between food intake and physical activity<br>To understand how to maintain a healthy body weight throughout life<br>To understand how to calculate energy and the main sources of energy in our diet<br>To be aware of the main factors that influence an individual's energy requirements | |

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| | **Protein**<br>Essential macronutrients made up of amino acids, crucial for building and repairing tissues.<br>Proteins support muscle growth, immune function, and various metabolic processes.<br>Cooking methods that preserve the protein content in foods.<br>Diverse protein sources, including plant-based options. | To understand the structure of proteins, including the difference between high biological value and low biological value proteins<br>To be aware of the functions of proteins in the diet<br>To know the main sources of protein in the diet<br>To understand what happens if we have a deficiency or excess of protein in our diet | |
| | **Lipids or fats**<br>Fats are a concentrated source of energy and consist of different types, including saturated, unsaturated, and trans fats.<br>Fats are essential for nutrient absorption, brain health, and hormone production.<br>Healthy fat sources, such as avocados and nuts.<br>Cooking techniques that use healthier cooking oils. | To understand the types and structure of fats, including the differences between saturated, unsaturated, and polyunsaturated fats<br>To understand the functions of fats in the diet<br>To be aware of the main sources of fat in the diet<br>To understand what happens if we have a deficiency or excess of fat in our diet | |
| | **Carbohydrate**<br>Carbohydrates as the body's primary source of energy and include sugars, starches, and fibre.<br>Carbohydrates fuel bodily functions and support physical activity.<br>Complex carbohydrates from whole grains, fruits, and vegetables. | To understand the functions of carbohydrates in the diet<br>To know the main sources of different types of carbohydrates in the diet<br>To know what happens if we have a deficiency or excess of carbohydrate in our diet<br>To understand the structure of carbohydrates, including the difference between sugars, starches and non-starch polysaccharide (NSP/fibre/dietary fibre) | Retrieval quizzes to build knowledge acquisition and understanding.<br><br>Individual task<br><br>Group oracy task |
| | **Fat-soluble vitamins**<br>Fat-soluble vitamins (A, D, E, K) are absorbed in the presence of dietary fats and stored in the body.<br>These vitamins play roles in vision, bone health, antioxidant defence, and blood clotting.<br>Recipes rich in foods containing these vitamins, such as leafy greens, nuts, and fatty fish. | To understand the functions of and the different types of fat-soluble vitamins<br><br>To continue to understand the functions of vitamins in the diet<br>To be aware of the different types of water-soluble vitamins | |
| | **Water-soluble vitamins**<br>Water-soluble vitamins (B-complex, C) dissolve in water and are not stored in the body for an extended period.<br>Support metabolism, immune function, and skin health.<br>Highlight foods rich in these vitamins, such as citrus fruits, leafy greens, and whole grains. | To be aware of the main sources of water-soluble vitamins in the diet<br>To continue to understand what happens if we have a deficiency or excess of vitamins in our diet | |
| | **Minerals**<br>Minerals are essential nutrients, including calcium, iron, potassium, and magnesium.<br>Minerals play roles in bone health, oxygen transport, fluid balance, and nerve function.<br>Integrate mineral-rich foods into recipes, such as dairy products, legumes, and leafy greens. | To understand the functions of minerals in the diet<br>To be aware of the main sources of minerals in the diet<br>To understand what happens if we have a deficiency or excess of minerals in our diet.<br>To recap on the terms anaemia and osteoporosis | |
| **Trinity** | **Water**<br>Water is a vital component for life, playing a crucial role in bodily functions such as digestion, nutrient transport, and temperature regulation.<br>Staying hydrated is essential for overall health and wellbeing.<br>The importance of adequate water intake and incorporate hydrating foods like fruits and vegetables into recipes. | Develop knowledge about the vital role water plays in bodily functions, including digestion, nutrient transport, and temperature regulation. | Formative assessment |
| | **Nutrients in food –** potatoes, rice, pasta, bread and other starchy carbohydrates<br>Potatoes, rice, pasta, and similar foods are rich in carbohydrates, providing a primary source of energy.<br>Essential nutrients such as fiber, vitamins, and minerals.<br>Diverse cooking methods for these staple foods.<br>The nutritional benefits and encourage variety in meal planning. | Recognize and understand the presence of essential nutrients like fibre, vitamins, and minerals in starchy carbohydrates.<br>Acquire the skill to incorporate starchy carbohydrates as part of a balanced diet. | Retrieval quizzes to build knowledge acquisition and understanding.<br><br>Individual task<br><br>Group oracy task |
| | **Nutrients in food –** Dairy and dairy alternatives<br>Dairy products and alternatives contain essential nutrients, including calcium, vitamin D, and protein.<br>These nutrients support bone health, immune function, and overall well-being.<br>Showcase recipes that incorporate dairy or plant-based alternatives.<br>Different ways to obtain these nutrients for those with dietary restrictions. | Develop knowledge about the essential nutrients present in dairy and dairy alternatives, such as calcium, vitamin D, and protein.<br>Understand how these nutrients contribute to bone health, immune function, and overall well-being. | |
| | **Nutrients in foods high in fats**<br>Foods high in fats include various sources such as avocados, nuts, seeds, and fatty fish.<br>Healthy fats provide essential fatty acids, support brain health, and aid in nutrient absorption.<br>Explore cooking methods that use healthy fats and incorporate them into balanced recipes. | Develop knowledge about various sources of high-fat foods, including avocados, nuts, seeds, and fatty fish.<br>Understand the diversity of healthy fats available in different food sources. | |
| | **How cereals are grown**<br>Cereal crops include grains like wheat, rice, oats, and barley.<br>Cereals are typically grown in fields through a process involving planting, cultivating, harvesting, and processing.<br>Discuss the journey from the farm to the table. Explore recipes that use different cereal grains. | Understanding the journey of cereal grains from the farm to the table.<br>Understand ethical considerations related to cereal production, including fair trade and environmental impact. | |
| | **How fruits and vegetables are grown**<br>Fruits and vegetables are cultivated through planting seeds or seedlings, nurturing the plants, and harvesting the produce.<br>Consider factors like soil health, climate, and sustainable farming practices in cultivation.<br>The seasonality of fruits and vegetables. Incorporate locally sourced produce into recipes. | Consider environmental factors such as climate and the implementation of sustainable farming practices in the cultivation process.<br>To creatively incorporate seasonal fruits and vegetables into diverse recipes.<br>Learn about the seasonality of fruits and vegetables, understanding when different varieties are in peak season. | Retrieval quizzes to build knowledge acquisition and understanding. |

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| | **Nutrients in food –** Meat and fish<br>Investigate the nutritional composition of diverse food groups, including dairy, cereals, meat, fish, fruits, vegetables, and fats. | Gain knowledge about the protein content in meat and fish, understanding their role in muscle development and overall body function.<br>Learn about the types of fats present in meat and fish, distinguishing between saturated and unsaturated fats.<br>Identify the vitamins and minerals present in meat and fish, recognizing their contribution to overall health.<br>Understand the significance of iron in meat and the importance of omega-3 fatty acids in certain fish for heart health. | Individual task<br><br>Group oracy task |
| | **Culinary traditions**<br>Explore diverse culinary traditions, fostering an appreciation for global cuisines and culinary practices. | Develop an appreciation for the diversity of culinary traditions from different cultures.<br>Gain insight into the cultural significance of various ingredients, dishes, and cooking techniques.<br>Acquire the skill to adapt recipes from different culinary traditions to suit personal preferences or dietary needs. | |
| **practice session** | **OCR GCSE Food Preparation and Nutrition Practice sessions**<br>**NEA 1**<br>**NEA 2**<br>**Written paper** | Investigation Task<br>Food preparation Task<br>Past papers | 15% of GCSE exam<br>35% of GCSE exam<br>50% of GCSE exam |

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| **Year 10 Practical lessons** | Sensory testing, Chicken Kiev, Catalan Chicken, Lasagne, Crème caramel Sausage rolls, Lemon meringue pie, Cinnamon rolls, Raising agents, Fish Pie, Home-made cheese, Lemon Cheesecake with biscuit base, Panna cotta with Strawberry compote, Whisked sponge fruit flan, Cottage pie, Tortellini with parsley and ricotta filling and Jam making. | |
| **What consolidation looks like in this subject** | Consolidation in Year 10 Food Preparation and Nutrition involves reinforcing foundational knowledge and skills, ensuring a comprehensive understanding of cooking techniques, nutritional principles, and safety protocols. This phase includes practical application through more complex culinary projects, exploration of advanced cooking techniques, and deeper nutritional analysis. Students are encouraged to engage in independent learning, reflective practice, and real-world applications, fostering a holistic understanding of the subject. The consolidation phase also introduces a diverse range of cuisines and cooking styles, preparing students for further study, and connecting classroom learning to practical, real-life scenarios. Ultimately, consolidation aims to solidify students' expertise, instil a passion for culinary exploration, and lay a strong foundation for future endeavours in the field of food preparation and nutrition. | |
| **Examples of Homework** | 1) Explain the difference between a food intolerance and a food allergy.<br>2) Use the Nutrition Programme to record your food for a day. Use the Nutrition Programme to calculate your protein intake.<br>1. How does this compare to your daily requirements?<br>2. What changes do you need to make to your diet?<br>3) Complete the Test Yourself questions<br>4) Watch the video on fats https://www.youtube.com/watch?v=QhUrc4BnPgg in preparation for next lesson<br>5) Revise year 10 F&N work. For exam practise revise FNU exam revision notes, work completed during year 10, along with accessing the sample GCSE FNU exam on OCR website | |
| **Key terminology** | Macronutrients, Micronutrients, Meal Planning, Food Pyramid, Foodborne Illness, Dietary Fibre, Food Allergy, Superfoods, Food Labelling, Portion Control, Vegetarianism, Functional Foods, Food Preservation, Hydration, Organic Food, Food Security, Food Additives | |
| **Super-curricular enrichment and scholarly extension** | • **Read:** Scientific Journals, Books on Culinary Techniques, Nutrition Literature, Food History and Culture Books: Read books that delve into the history and cultural significance of various cuisines, understanding the evolution of food traditions. Food Technology Publications: Explore publications on food technology and innovation, learning about the latest advancements in food processing, preservation, and packaging.<br>• **Watch:** Cooking Documentaries, Educational Cooking Shows, Nutrition Webinars, Food Science Explained Videos: Explore online videos that break down complex food science concepts, helping to understand the chemical and physical properties of ingredients. Culinary Technique Tutorials: Watch online tutorials that demonstrate advanced culinary techniques, such as molecular gastronomy, sous vide cooking, and pastry arts.<br>• **Listen:** Listen to podcasts featuring discussions on nutrition science, dietary trends, and interviews with experts in the field. Food History Podcasts. Tune into interviews with renowned chefs. Food Industry Insights Podcasts. Listen to podcasts that offer insights into the food industry, covering topics such as sustainable sourcing, food entrepreneurship, and market trends.<br>• **Visit:** Visit Culinary Museums, Farm Visits, Food Science Labs., Attend specialized cooking classes and workshops hosted by professional chefs, culinary schools, or local cooking schools to hone skills and learn new techniques. Participate in culinary events, food festivals, and competitions to experience diverse cuisines, network with industry professionals, and stay updated on culinary trends. | |
| **Useful websites** | 1. Food Network : A comprehensive resource for recipes, cooking tips, and culinary inspiration.<br>2. Eat Well - Cooking Light : Offers healthy recipes, nutrition advice, and meal planning tips.<br>3. Academy of Nutrition and Dietetics : The world's largest organization of food and nutrition professionals, providing evidence-based information and resources.<br>4. BBC Good Food : Features a wide range of recipes, cooking tips, and nutritional information.<br>5. Nutrition.gov : A government resource offering information on healthy eating, dietary guidelines, and nutrition basics.<br>6. Allrecipes : A community-driven platform with a vast collection of user-reviewed recipes and cooking advice.<br>7. Nutrition Program : Food teaching resources | |
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