Learning Journey - Design & Technology

Food Technology Curriculum Intent	
KS3	Pupils cook and prepare a range of sweet and savoury dishes by selecting and using appropriate equipment, techniques and cooking methods with increasing independence. Pupils to show an understanding of how to cook safely and hygienically with increasing confidence. Pupils develop an understanding of nutrition and are able to make informed, healthy choices when planning their diet. An understanding of food provenance, special dietary requirements and the most appropriate selection of cooking methods (their advantages and disadvantages) is also developed. An understanding of the basic functions of some common ingredients is also demonstrated. An appreciation of food cultures from around the world is also promoted. In year 9 students complete more cooking practicals (as there is no rotation, so the subject is studied throughout the academic year). This provides a transition between KS3 and KS4 as students develop more complex preparation, cooking and presentation skills in preparation for the GCSE course. Principles of nutrition, diet, food provenance and the functions of ingredients are developed to enable students to better understand the scientific principles of the subject. It also enables students to increase their understanding of diet and nutrition for the benefit of their wellbeing and personal health.
KS4	AQA Food Preparation & Nutrition GCSE: Pupils plan, cook and present a range of challenging, multifaceted dishes demonstrating more advanced technical skills to increase their awareness of British and international cuisines. A thorough understanding of nutrition is developed with students able to classify macro and micronutrients as well as demonstrate an in-depth understanding of why specific nutrients are required, how much is required and where they can be obtained from. An in depth understanding of the chemical properties and uses/functions of a wide range of ingredients is developed. Detailed knowledge of cooking methods and corresponding methods of heat transfer is taught. An ability to apply current healthy eating guidelines and an understanding of specific energy needs to dish and diet choice is also practiced. Pupils also learn about the prominent current issues related to food production; for example food miles, sustainability, genetic engineering, causes of poor health related to diet. An ability to perform effective nutritional and sensory analysis is also developed. The health and safety and food hygiene awareness learned in KS3 is also developed with students learning about cross contamination, food borne illnesses, food poisoning and the roles and responsibilities of those involved in the safe and hygienic production of food (eg: Environmental health officers).
KS5	WJEC Food Science & Nutrition Level 3 Certificate/Diploma: Year 12: Pupils complete one unit in which they will investigate, demonstrate and evaluate their ability to meet the nutritional needs of specific groups. An in depth understanding of the function, chemical and physiological functions of ingredients is developed. Pupils will be able to demonstrate an understanding of the science of food safety, nutrition and nutritional needs in a wide range of contexts, and through on–going practical sessions, will gain advanced practical skills to produce quality food items to meet the needs of individuals. Year 13: The diploma qualification will enable pupils to develop their understanding of the science of food safety and hygiene; essential knowledge for anyone involved in food production in the home or wishing to work in the food industry. Practical sessions will support the gaining of theoretical knowledge and ensure learning is a tactile experience. Studying one of the two optional units will allow learners the opportunity to study subjects of particular interest or relevance to them, building on previous learning and experiences. Each unit within the qualification has an applied purpose which acts as a focus for the learning in the unit. The applied purpose demands authentic work related learning in each of the available units. It also requires pupils to develop an understanding and awareness of how the use and application of their learning impacts on themselves, other individuals, employers, society and the environment.

Food Technology Curriculum Implementation

	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
Year 7	13 Week rotation: (week 1-6) ● Food safety and hygiene ● Hazard analysis/risk assessment ● Accurate weighing & measuring	13 Week rotation: (week 7-13) ● Understanding of main nutrient groups and their functions & sources ● Understanding of food provenance and usage	13 Week rotation: (week 1-6) ● Food safety and hygiene ● Hazard analysis/risk assessment ● Accurate weighing & measuring	13 Week rotation: (week 7-13) ● Understanding of main nutrient groups and their functions & sources ● Understanding of food provenance and usage	13 Week rotation: (week 1-6) ● Food safety and hygiene ● Hazard analysis/risk assessment ● Accurate weighing & measuring	13 Week rotation: (week 7-13) ● Understanding of main nutrient groups and their functions & sources ● Understanding of food provenance and usage

	• Understanding of cooking methods • Basic food practical skills (Small cakes, pasta salad, baked burgers, vegetable stir fry) • Understanding of the eatwell guide	• Understanding of healthy eating guidelines • Designing and developing a food product • More complex practical skills (sweet or savoury scones, bolognese, mini quiches, own pizza design).	• Understanding of cooking methods • Basic food practical skills (Small cakes, pasta salad, baked burgers, vegetable stir fry)	• Understanding of healthy eating guidelines • Designing and developing a food product • More complex practical skills (sweet or savoury scones, bolognese, mini quiches, own pizza design).	• Understanding of cooking methods • Basic food practical skills (Small cakes, pasta salad, baked burgers, vegetable stir fry)	• Understanding of healthy eating guidelines • Designing and developing a food product • More complex practical skills (sweet or savoury scones, bolognese, mini quiches, own pizza design).
Year 8	13 Week rotation: (week 1-6) • Revisiting healthy eating and the eatwell guide • Functions of specific nutrients • Understanding the uses of common ingredients • How to create a balanced meal from limited food options • Writing and collecting market research • Developing food practical skills inline with healthy eating guidelines (Pasta bake, dried fruit cookies, Mini carrot cakes, curry)	13 Week rotation: (week 7-13) • Using market research to generate a range dish ideas based on a healthy eating brief • Dish design communication • Effective annotation of design ideas • Developing two final dish ideas to suit healthy eating brief • Analysing the nutritional implications of ingredients/dishes • Calculating costings and working to a budget • Creating method/making plan • Evaluating dishes Developing food practical skills (Savoury rice, mini quiches, own savoury healthy dish, own sweet healthy dish)	13 Week rotation: (week 1-6) • Revisiting healthy eating and the eatwell guide • Functions of specific nutrients • Understanding the uses of common ingredients • How to create a balanced meal from limited food options • Writing and collecting market research • Developing food practical skills inline with healthy eating guidelines (Pasta bake, dried fruit cookies, Mini carrot cakes, curry)	13 Week rotation: (week 7-13) • Using market research to generate a range dish ideas based on a healthy eating brief • Dish design communication • Effective annotation of design ideas • Developing two final dish ideas to suit healthy eating brief • Analysing the nutritional implications of ingredients/dishes • Calculating costings and working to a budget • Creating method/making plan • Evaluating dishes Developing food practical skills (Savoury rice, mini quiches, own savoury healthy dish, own sweet healthy dish)	13 Week rotation: (week 1-6) • Revisiting healthy eating and the eatwell guide • Functions of specific nutrients • Understanding the uses of common ingredients • How to create a balanced meal from limited food options • Writing and collecting market research • Developing food practical skills inline with healthy eating guidelines (Pasta bake, dried fruit cookies, Mini carrot cakes, curry)	13 Week rotation: (week 7-13) • Using market research to generate a range dish ideas based on a healthy eating brief • Dish design communication • Effective annotation of design ideas • Developing two final dish ideas to suit healthy eating brief • Analysing the nutritional implications of ingredients/dishes • Calculating costings and working to a budget • Creating method/making plan • Evaluating dishes Developing food practical skills (Savoury rice, mini quiches, own savoury healthy dish, own sweet healthy dish)
Year 9	• Understanding of macro and micronutrients (functions and sources) • Understanding of high and low biological value protein (functions and sources) • Understanding of the consequences of consuming too	• Understanding of the important of water and fibre (functions and sources) • Understanding the specific causes and consequences of nutrient deficiencies • Understanding special dietary requirements and	• Understanding of GDA`s (Guideline daily amounts) and the requirements for different genders and life stages • How to calculate basal metabolic rate and physical activity level • Understanding of energy needs of different age groups	• Understanding the functional and chemical properties of proteins, carbohydrates and fats. • Understanding of the uses/functions of fats, sugars, flour and eggs • Understanding food spoilage and microorganisms	• Understanding and applying food preservation techniques • Understanding high risk foods and how to prepare them • Revising and improving understanding of how to avoid cross contamination	• Improving understanding of safe food storage • Understanding the role of a health and safety executive • Understanding factors that affect food choice • Designing dietary provision for different life stages/ages

	much or too little of given macro and micro nutrients • Safe and effective use of commonly used equipment • Developing practical skills (Pastry parcels, Samosas, shepherds pie, swiss rolls, halloween themed practical)	how to cater for them • Understanding of portion control and costing • Developing practical skills (Pizza whirls, spring rolls, marble cake, quiche lorraine, christmas themed practical)	• Understanding of why food is cooked • Understanding of cooking methods including methods of heat transfer • Detailed comprehension of different cooking methods including the advantages and disadvantages • Developing practical skills (Lasagne, Jam tarts, toad in the hole, whisked sponge)	• Understanding and experimenting with raising agents • Understanding the importance of temperature control • Developing practical skills (egg-based dish, mini pavlova modified burger recipe, own choice of dish for children)	• Revising and improving understanding of common strains of food poisoning • Safe and effective use of the temperature probe • Understanding further cooking methods (braising, poaching, blanching etc) • Developing practical skills (Fruit flan, viennese whirls, pasta au gratin, own choice of British themed dish)	• Understanding how religion and culture affect diet • Understanding genetic engineering in food production • Understanding and applying knowledge of fair trade • Understanding food packaging including laws • Detailed sensory analysis/evaluation • The olfactory system • Food additives • Developing practical skills (Italian dish, French dish, Asian dish, own choice of summer themed dish)
Year 10	• Understanding and self assessing awareness of key cookings skills • Revising and improving understanding of healthy eating principles • Meeting the nutritional needs of different age groups/life stages • Improving understanding of the functions of different proteins • Understanding functions and sources of HBV & LBV proteins	• Understanding the importance of fats in our diets • Understanding the difference between saturated and unsaturated fats and the functions and sources of each • Understanding the glycaemic index • Understanding the consequences over and underconsumption of carbohydrates • Revising and improving understanding of specific micronutrients (vitamins A-k and minerals)	• Improving understanding of the important roles of water and fibre and how they complement each other • Designing dishes to meet the needs of teenager boys and girls with different lifestyles • Investigating medical conditions/complications linked to diet (access and deficiency) • Understanding how to calculate energy values in given foods/dishes • Understanding how to improve/adapt dishes inline with healthy eating advice	• Revising and improving understanding of a range of common food allergies/intolerances • Revision of methods of heat transfer: conduction, convention & radiation • Investigating water-based cooking methods • Investigating Fat-based cooking methods • Investigating dry cooking methods • Adapting menus/diets to improve the healthiness of cooking processes	• Functional properties of ingredients(making a foam, coagulation, dextrinisation) • Understanding the functional properties of fats • Analysing the advantages and disadvantages of a range of different raising agents • Revising and improving understanding of food spoilage and how it can be slowed/reduced • Understanding yeasts, moulds and enzymic browning • Revising safe food storage and how it can be promoted	• Improving understanding of and sharing practical tips for the safe food production during in various stages of production • Furthering understanding of food poisoning strains and how they can be avoided • Understanding organic farming and food production methods • Understanding intensive farming and the arguments for and against • Understanding factory farmed, free-range, trawling and fish farming • Waste reduction and sustainability • Food poverty/security

Year 11	Coursework/NEA Task 1 as set by exam board on 1st September: ● Understanding the brief ● Task analysis ● Researching the given theme ● Researching the functional and chemical properties of the ingredients related to the theme ● Devising and collecting market research ● Conclusion of research ● Using research to draw/make hypothesis predictions for forthcoming experimental practicals	Coursework/NEA Task 1: ● Practical experiment (proving or disproving hypothesis one) ● Analysis of experiment 1 and how it has proved/disproved the first hypothesis prediction ● Practical experiment (proving or disproving hypothesis two) ● Analysis of experiment 2 and how it has proved/disproved the first hypothesis prediction ● Practical experiment (proving or disproving hypothesis three) ● Analysis of experiment 3 and how it has proved/disproved the first hypothesis prediction ● NEA/Coursework conclusion ● Mock exam preparation	Coursework/NEA Task 2 as set by the exam board on 1st November: ● Understanding the brief ● Task analysis ● Researching the given theme ● Researching the target market ● Devising and collecting market research ● Showing an understanding of for appropriate nutrition ● Demonstrating an understanding of important food safety/hygiene in relation to the brief ● Concluding research ● Generating appropriate dish ideas	Coursework/NEA Task 2: ● Cooking 3-5 recipe trials to demonstrate a range of technical skill ● Evaluate recipe trials with links to brief and target market ● Plan final three course meal with explanations of choices made linked to research/brief ● Generate a detailed making plan/method with health and safety, hygiene and quality control steps ● Cook final three course meal and present for photographing and assessment ● Complete detailed coursework evaluation with a thorough nutritional and sensory analysis of the dishes ● Calculate the costing of the dishes	Revise for GCSE exam in remaining lessons; Revision on key topics to included ● Food safety ● Food Hygiene ● Nutrition ● Functional properties of ingredients ● Special diets ● Causes and prevention of food related illness/conditions ● Sustainability in cooking and food production ● Cooking methods ● Heat transfer ● How religion and culture affect food choice	STUDY LEAVE
Year 12	Bridging the gap between KS4 & KS5 ● Nutrition principles ● Food safety and hygiene, course content and structure. ● Catering for special diets ● Food choice and sustainability ● Pasta practical ● Ravioli with homemade pasta ● Introduction to example NEA Task ● Puff pastry practical ● Quality control, safety and hygiene	● Food spoilage: causes and prevention ● Food poisoning: Pathogens ● Understanding of food poisoning strains ● Fish preparation ● Mackerel dish ● Food poisoning: implications and understanding of microbiota ● Macronutrients: functions and chemical structures ● Macronutrient practical	● Implications of food allergies and intolerances for food businesses ● Cooking methods and their impact on the nutrition of ingredients ● Design a menu for children ● Three course meal for children ● Filo pastry from scratch ● Making a product with homemade filo pastry ● Choux pastry practical	● Lemon meringue pie practical ● Classification of nutrients (phytochemicals) ● Food labeling laws ● The glycaemic index in detail • Complementary interactions of nutrients ● The structure of nutrients • Amino acids, high and low biological value proteins ● Understanding of the structures of Lipids, fats and oils	NEA Learner assignment brief as set by WJEC exam board: ● Selecting an appropriate task ● Analysing the task ● Researching the task ● Satisfying AC 1;1 by explaining how individuals can take responsibility for food safety ● Satisfying AC 1;2 by explaining the methods used by food handlers to keep themselves clean and hygienic	Revision of key topics in readiness for 90 min written exam: Key revision topics covered in class to include… ● Structure of nutrients ● Nutritional needs of specific groups ● Catering for special diets ● Microorganisms and food spoilage ● Macronutrients: functions and chemical structures ● Food poisoning: Pathogens

	• Quality control when planning a practical • Example NEA task practical • Microorganisms and food spoilage • Seabass practical • Mini toad in the hole practical • Roux sauce and age specific dish design • Puff pastry practical	• Detailed investigation into micronutrients • Allergenics and food-related illness • Custard tart practical • Millionaire shortbread practical • Dress codes and training for food handlers • Nutritional needs of specific groups	• Savoury roulade practical • Plating up/presentation techniques • Spun sugar practical • Food safety legislation • Hazard analysis and critical control points • Cross contamination cross examined	• Fatty acid molecules and essential fatty acids • Chemical composition of carbohydrates • The chemical structure of micronutrient • Trace elements • Body fluids and water • Food production methods and their effects on nutrients • Understanding and summarising how a range of cooking methods affect nutrients • Obesity-related medical conditions	• Satisfying AC 1;3 by explaining the methods used to keep work areas clean and hygienic • Satisfying AC 1;4 by analysing the risks associated with food safety for dishes chosen as part of the NEA task • Calculating and analysing the nutritional profile of dishes chosen • Satisfying AC 2;3 by assessing how different cooking methods affect the nutritional value of the dishes • Satisfying AC 3;2 by describing the characteristics and consequences of unsatisfactory nutritional intake • Satisfying AC 3;4 by assessing how different situations affect nutritional needs • Satisfying AC 2;1 by explaining how nutrients are structured • Plan, prepare, cook and present dishes to satisfy AC linked to practical work	• Allergenics and food-related illness • Complementary interactions of nutrients • Classification of nutrients (phytochemicals) • Body fluids and water • Understanding and summarising how a range of cooking methods affect nutrients • Obesity-related medical conditions
Year 13	• How microorganisms affect food safety: The effects of environmental conditions on microbial growth and reproduction. • Yoghurt making practical • Understanding the different categories of `high-risk foods`	• How food safety is managed in different situations • Lactose/Dairy free pancakes • Control measures used to minimise food safety risks • Blending Practical: • Grilling Practical **Unit 2: Practice external assessment task:**	**Unit 2: Practice external assessment task: Continued** • Address AC 3.3 (explanation of control measures used to minimise food safety risks) • Address AC 3,4 (justification of how the proposed control measures	• Bain marie Practical • Stock Practical • Braising Practical • En papillote Practical **Final Unit 4 Non Exam Assessment Task (14 hours)** • Begin NEA by selecting and issue	**Final Unit 2 Non Exam Assessment Task (Set by WJEC in May)** • Demonstrate excellent understanding of AC 1.1 (Describe the the properties of microorganisms) • Show a good understanding of AC 1.2 (Assess how changing conditions	STUDY LEAVE

	and how temperature affects the growth rates of microorganisms. • Understanding how Ph, osmotic pressure and water activity affect the growth of microorganisms. • Understanding how oxygen levels and the availability of nutrients affect the growth of microorganisms. • Food handling and prevention of food safety hazards • Preserved ingredients practical • How microorganisms affect food quality • How preservation methods prevent the growth of microorganisms • Preservation techniques • The physiological basis and effects of food poisoning • The physiological basis of food allergies and food intolerances • Gluten free bread practical	• Understand the requirements of the practice unit • Use task analysis and class notes to begin task 1, a food safety training resource • Address AC2.1 (The physiology of food intolerances). • Address AC2.3 (The physiology of food poisoning & intolerances). • Address AC2.4 (Symptoms of food induced ill health) • address AC 1.2 (how changing conditions affects growth of microorganisms) • AC 1.4 (how preservation methods prevent growth of microorganisms • Address AC 3.1 (Food safety hazards that may arise as a result of the festival provision) • Address AC 3.2 (Assessing the risk of food safety as a result of the festival) • Enriching Practical	would minimise food safety risks) • Fileting Practical • Molding/shaping Practical • Separating Practical • Marinating • Practical **Unit 4: Current issues in Food Science and Nutrition** • Understand the requirements of the unit and will understand a range of current issues in food science • investigate at least one current issue in Food Science and Nutrition • Childhood obesity • Healthier pizza practical • Begin investigating the second of three shortlisted issues. • Understanding of Fair trade and design a product that uses at least one fair trade ingredient • Fair trade dish practical • Begin investigating the third of three shortlisted issues • Addressing a current issue: Ready meals • Ready meal `From scratch` practical	to investigate and analysing the task • Begin planning research to suit choice of issue selected • Conduct thorough, concise and highly relevant secondary research • Perform two or more secondary research tasks • Identify ways in which AC 3.2 and AC 1.3 have been satisfied and produce informative, well considered secondary research • Conduct thorough, concise and highly relevant primary research • Complete primary research and use it to drawer conclusions • Produce a detailed report that will aid analysis of the rational/hypothesis • Add a detail discussion and conclusion of research findings with reference to project rationale and hypothesis • Complete a detailed, well articulated evaluation with discussion of the hypothesis • If there is time, a further practice Unit 2 task will be completed ahead of the final task set by WJEC in May.	affect growth of microorganisms in different environments) • Show a good understanding of AC 1.2 and in particular how water activity , oxygen and nutrients affect growth of microorganisms • Show a good understanding of AC 1.3 (Explain how microorganisms affect food quality) • Show a good understanding of AC 1.4 (Assess how preservation methods prevent the growth of microorganisms) • AC2.1 explain the physiology of food intolerances • AC2.2 explain the physiological basis of food allergies • AC2.3 explain the physiological basis of food poisoning • AC2.4 describe the symptoms of food induced ill health • AC3.1 describe food safety hazards in different environments • AC3.2 assess risk to food safety in different environments • AC3.3 explain control measures used to minimise food safety risks	

Assessment Maps

KS3

https://docs.google.com/document/d/1mDP60piAPiTmacwSunU0AWEwRA7RPEkPb6wgLozD82k/edit

KS4.5

https://docs.google.com/document/d/1g4wjzRLXXT2UX8exwIK8vOJAsmX6Gns0PcjnpO8R9cA/edit