

Food| Curriculum Map



Co-op Academy
Florence MacWilliams

Curriculum | Intent

Food Preparation and Nutrition curriculum is to equip students with the vital life skills, scientific knowledge, and creative independence required to feed themselves and others healthily, affordably, and safely now and in later life. We aim to foster a lifelong love of food and cooking while developing inquisitive, scientifically minded learners who understand the critical relationship between diet, health, and the environment.

Our curriculum is:

Food Preparation and Practical Skills: To build confidence and physical dexterity through an increasingly complex repertoire of savoury and sweet dishes. Students will master high-level culinary techniques—including precise knife skills, complex saucemaking, and pastry/dough creations—moving from highly guided recipes to independent modification.

Nutrition and Health: To embed a deep understanding of the functions of macro and micronutrients, the Eatwell Guide, and how nutritional needs change across the human lifespan. Students will learn to critically analyse dietary choices to promote long-term physical well-being and prevent diet-related illnesses.

The Science of Food: To explore the functional, chemical, and physical properties of ingredients. Students will investigate the underlying science behind cooking processes (such as gelatinisation, dextrinisation, emulsification, and coagulation) through practical food science experiments. Food Safety and Hygiene: To instil rigorous habits regarding kitchen safety, personal hygiene, and microbiological safety. Students will confidently identify potential kitchen hazards and understand how to prevent food spoilage and cross-contamination.

Food Provenance and Consumer Awareness: To expand students' "cultural capital" by exploring British and international culinary traditions. Students will evaluate the environmental, ethical, and economic factors influencing food security, including food miles, seasonality, sustainability, and changing consumer preferences.

Impact and Aspirations: Ultimately, our curriculum intent is to ensure that every student leaves our school as a self-sufficient individual who can make informed consumer choices. Whether they choose to pursue further education and careers in the food commodity, catering, or hospitality sectors, or simply cook for themselves at home, they will possess the knowledge to do so sustainably, economically, and nutritiously.

	Autumn Term	Spring Term	Summer Term
7	<u>Introduction into food and using equipment.</u> Year 7 students will begin learning about the equipment they will use in the room when carrying out practicals. Hobs will cover all the functions on the hob and how induction works. We will also cover the different techniques of cooking that can be used on a hob and what they mean. Student will be able to tell the difference between keywords. Knives will also be covered and the health and safety around them. Techniques such as slicing, dicing, chopping will be explained and carried out in practicals.	<u>Dough Handling</u> Students will learn about the different components of dough like yeast, fermentation, raising agents. Technical skills of gluten formation, fermentation (proving) for bread, pastry, pasta. Dough handling will make link to shaping and finishing, also how to handle dough without knocking air out. This will cover properties like extensibility, elasticity, tenacity (resistance to deformation), and stickiness. Achieving the right balance ensures optimal processing and final volume.	<u>Evaluating food/ Sensory analysis</u> Making link to spring term we will start the term with scones and dough but evaluating food senses. This will then move into sensory evaluation. Importance of senses when making food choices: sight, taste, touch and aroma. Scones and cookies will be covered in practical lessons. In theory lessons we will cover, sensory analysis and evaluating food.
8	<u>Developing starch into (mother) sauces</u> Developing starches into sauce will cover the main principles also known as mother sauces. There are 5 main mother sauces which are <u>Béchamel, Velouté, Espagnole, Tomato, and Hollandaise</u>, we will cover how they are made and the science behind them. This will be cover in lessons where students will make a rue to gelatinise the sauce.	<u>Developing sauces</u> Developing sauces will cover the processes you can use on a hob to cook sauces. One recipe we'll be making is mayonnaise and how the emulsification holds the sauce together (this will be covering the chemistry behind the bonds.) We will also be learning about the cooking methods on the hob such as simmering and reduction. The four main principles are balancing viscosity, emulsification, and flavor compounds. In the final lesson of the spring term we will explore desserts and heat transfers to prepare for the summer term.	<u>Fortification</u> Fortification and child slave labour is the overarching term for the recipes in the summer term. All of the recipes made will cover why fortified foods are important and how they are in most of the foods we eat including desserts. We will additionally be using ingredients that aren't fortified like apples and mushrooms. These ingredients will show that even if produce can not be afforded the can be grown locally to prevent illnesses like pellagra. The history of pellagra will be taught and why foods are fortified to the present day.
9	<u>Pathogen Awareness</u> Pathogen awareness will be done by using uncooked meat. This will be the first time that raw meat has been used in ks3. This will teach students how to also use new equipment such as a meat probe to test temperature of what has been cooked and the dangers of what could happen if they aren't cooked to the correct temperature. Lesson 1 will cover Food Safety/4 C's Protein/ Pathogen control. Chemistry will be introduced further through the illness that can be carried through pathogens and different types of pathogens from different meats.	<u>Meat Handling</u> Meat handling will teach the different techniques of how to handle meat and why it is handled in this way. The two different practicals require firm and gentle handling of meat. We will also cover the sanitary procedures and safety practices used during the selection, processing, storage, and preparation of meat. Linking back to Autumn term we will make reference biological, physical and chemical hazards in place and what pathogens may be present. The four C's are the key to remember at the end of the term which are, cleaning, cross-contamination, chilling and, cooking.	<u>World foods</u> World food is investigating geographical influences. We will be making recipes from 3 different cultures and additionally looking into the types of farming in them countries. Each region will dive deeper into agricultural practises and how different farming is needed due to climate. Staple crops (crops which grow the best), environmental influences, culinary traditions will be explored.

		<u>Autumn Term</u>	<u>Spring Term</u>	<u>Summer Term</u>
7	Careers Link	<u>Introduction into food and using equipment.</u> Year 7 students will begin learning about the equipment they will use in the room when carrying out practicals. Hobs will cover all the functions on the hob and how induction works. We will also cover the different techniques of cooking that can be used on a hob and what they mean. Student will be able to tell the difference between keywords. Knives will also be covered and the health and safety around them. Techniques such as slicing, dicing, chopping will be explained and carried out in practicals.	<u>Dough Handling</u> Students will learn about the different components of dough like yeast, fermentation, raising agents. Technical skills of gluten formation, fermentation (proving) for bread, pastry, pasta. Dough handling will make link to shaping and finishing, also how to handle dough without knocking air out. This will cover properties like extensibility, elasticity, tenacity (resistance to deformation), and stickiness. Achieving the right balance ensures optimal processing and final volume.	<u>Evaluating food/ Sensory analysis</u> Making link to spring term we will start the term with scones and dough but evaluating food senses. This will then move into sensory evaluation. Importance of senses when making food choices: sight, taste, touch and aroma. Scones and cookies will be covered in practical lessons. In theory lessons we will cover, sensory analysis and evaluating food.
		<u>Kitchen Assistant.</u> Learning fundamental hob safety and kitchen hygiene is an essential to becoming a kitchen assistant. This career involves helping the chefs maintain a clean kitchen, running smoothly and organized. Basic health and safety needs and knowledge of appliances are key to keeping work spaces safe.	<u>Baker</u> Having a basic understanding of yeast, gluten and dough elasticity prepares for a career in bakeries or food production. This career can expand into baking bread, cookies and pastries. The knowledge of dough will help to prepare and shape products for sale.	<u>Quality Assurance.</u> A quality assurer would conduct sensory evaluations and testing food properties to feedback to the developer if the product is ready for wholesale or not. Quality assurers have a sophisticated palette and use language such as aroma and mouth feel.

Autumn Term

Spring Term

Summer Term

8

Developing starch into (mother) sauces

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Developing sauces

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Fortification

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Saucier

A saucier has understanding of the 5 main mother sauces. This allows the saucier to develop new sauces using thermal controls. To do this a saucier needs to understand how to make a roux and gelatinise liquids accurately without them splitting. This takes place in high-end kitchens.

Chef de Partie

A chef de partie is a line cook who is in charge of specific stations in high-end kitchens. This involves managing sauciers, poissonnier, rotisseurs, and more. The key responsibilities are to prepare stations before work begins, quality control what is being prepared and supervising chefs.

Public health nutritionist

Public health nutritionists investigate nutritional fortification. This follows public health policies ensuring that foods incorporating fortification into products for mass wholesale. This ensures that the public are consuming vitamins and minerals in their everyday foods to prevent nutrient deficiencies.

Careers
Link

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	Careers Link <u>Environmental health officer</u> An environmental health officer would enforce the 4 C's (cooking, cleaning, chilling and cross contamination.) This would involve testing equipment like meat probes to ensure the public is safe in what businesses are providing them. This would then result in issuing a food hygiene rating.	<u>Butcher</u> Having a knowledge of biological and chemical hazards, correct temperatures and sanitary processing during meat preparation. Developing further would explore butchery skills such as filleting, butterflying and mincing.	<u>Agricultural Consultant</u> A career in agricultural consultancy would explore geographical influences, climate control in farming and cultural practises. A feature is the new developing science and import/export management. This helps farmers to have a more sustainable farm and promote yield in farming.

Autumn Term

Spring Term

Summer Term

10

Functional properties of food

In the Autumn term we will be re-covering the functional properties of food. This term will start with proteins when making dough for pasta and learning about denaturation and coagulation when making sauces. (When the proteins unravel and re-bond too tightly together and creating lumps in liquids.) Following this will be the viscosity and retrogradation in lemon meringue pie and pastries. This will cover more scientific principles of how ingredients are affected by one another and what bonds are made. Viscosity will teach how liquids flow in food and how "gelatinisation" starch absorbs liquid when heated. Retrogradation will additionally link with how gelatinisation and dextrinization work. Fats and oils are covered in the final portion of the autumn term and how they soften and harden in food and what makes food keep its shape E.G: Butter. This is due to the plasticity and how different temperatures manipulate the structure on food and the different techniques used to get different consistencies.

Why we cook and ingredients science

In the spring term we will cover the science behind ingredients and why we cook. Why we cook will link to safety and sensory analysis of why specific ingredients are used and how we can improve recipes. Sensory analysis will dive into depths of more than just preference but the textures, aromas and how palatable a dish is. We will learn the highest value words that will be used for course work to allow students time to adjust to the vocabulary. The function of ingredients will cover some of the ways we cook and use heat to cook. The 3 main ways are conduction, convection and radiation. All students will be able to differentiate the sources and confidently use them when describing how a dish has been cooked. In addition to this we will look at different "agents" such as raising, setting, nutritional, processing. Finally we will re-learn the science behind food and how specific properties of food come together. An example of this is gliadin and glutenin ravel together to create gluten in products.

Mother sauces and food choices

The summer term will re-cover most KS3 knowledge and how this can be linked coursework in preparation for Y11. Mother Sauce is being re-taught to scaffold previous knowledge and how they link to most dishes. This gives students the opportunity to improve their culinary skills with learning new recipes linked to both mother sauces and time management. All recipes being made in the summer term will have a mother sauce and a component of managing time/ other tasks while the sauce is cooking. An example of this is eggs benedict where the student will make the sauce and need to continuously check on the heat of the pan whilst stirring to prevent over coagulation. Food choices will cover all the different reasons people may make alternative food choices and what this may mean. Some examples of this may be allergies, intolerances, religion, preference, etc. We will then look at some alternatives that can be used in dishes to make the changes. This will then be evaluated and what the changes can mean to the dish and how they will affect the overall finished piece.

Careers Link

Food Developer

To become a food developer the science of coagulation, viscosity and plasticity all need to be put into practice when formulating new food products. Additionally an inventive mind would also need to adapt or develop a new recipe to improve value and shelf life.

R&D Chef

A R&D chef would work with food developers to put their ideas into practice to create new flavour profiles and creating what's called a "gold standard" recipe. This is done to maximise taste and presentation of a dish and guides how the product can go from a single serve to a large batch.

Market research manager

A market research manager studies consumer habits and works with companies to help them design and sell their product to the public. This involves analyzing consumers, tracking food trends, studying competitors, reporting findings to help businesses improve products and appeal to the wider community rather than a targeted audience.



Co-op Academy
Florence MacWilliams

At Co-op Academy Florence MacWilliams, colleagues and pupils work at 'PACE' ensuring pride, ambition, care, and excellence for self, school and city