

ASPIRE – ENDEAVOUR - SUCCEED

## Purpose and aims

### Purpose of study

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.

Pupils should be taught to:

- understand and apply the principles of nutrition and health
- cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet
- become competent in a range of cooking techniques [for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways; using awareness of taste, texture and smell to decide how to season dishes and combine ingredients; adapting and using their own recipes]
- understand the source, seasonality and characteristics of a broad range of ingredients

## Threshold concepts

### The Design Process

- Analyse - Research purposefully: Using a range of sources showing selectivity and analytical skill.
- Design - Visual Communication: Demonstrate innovation and creativity in recipe design and cooking
- Make - Safe working Practice: Select and use equipment safely and accurately in order to prepare and cook a range of dishes demonstrate a range of skills.
- Evaluate - Critical Reflection: Demonstrate the ability to reflect critically throughout the design process showing an understanding for modification and improvement of dishes and recipes to meet nutritional needs.
- Technical Knowledge - Practical methods of cookery and preparation techniques from Yr 7&8 dishes.
- Mathematical knowledge – weighing and measuring during practical lessons.
- Impact on Society: Understand developments in food and nutrition, their ecological and social footprint with an awareness of the impact on society.
- ACCEESSFMM

## Sequence of learning

The **first topic** will be food provenance. Students will learn about where different foods come from and why they must be sourced from other countries. This topic will also allow for students to revisit British and international cuisine studied in year 8. However, this will have the added detail of food miles and the impact on the environment (food waste), etc. Students will also look at seasonality and how this impacts British cuisine and what foods there are available locally.

The **second topic** will be food choice. Here pupils will gain a better understanding of why people choose certain foods and the different impacts this can have on our lifestyle. This will allow students to build on their previous knowledge gained in year 8 on food choice with more detail into the factors affecting food choice.

The **third topic** will be food science. This section will cover the more in-depth knowledge which will aid pupils if they are to choose this topic at KS4. These are mainly new areas of learning for food and so will not have been covered in previous study with the small exception of cooking methods looked at in year 7 or 8.

Throughout this project, students will also complete practical tasks by making the following dishes:

- Vegetable chopping methods (knife skills)
- Cottage Pie
- Schnitzel
- Swiss roll
- Savoury bread swirls/ pizza

All dishes have been chosen to ensure pupils recap or practise new skills ready for any practical assessment. Each of these dishes will allow for students to work on, knife skills, crumbing method, creaming method, cross contamination control, bread making. These skills give pupils the opportunity to improve their culinary skills and prepare them for further education in the subject should they choose this option.

**Subject knowledge**

Subject knowledge Students will know that...	Procedural Knowledge Students know how to..
<p>Design is a process that is cyclical/iterative</p> <p>Careers/Employment in the industry are explicitly linked to all or some aspects of the design process.</p> <p>Different careers focus on key areas of the design process.</p> <p>Term 1: Costume Designers - Film Term 2: Food Nutritionist Term 3: Electrician</p>	<p>Apply the daily tasks carried out in specific careers to the DNA design process.</p>
<p>The order of the design process</p>	
<p>What the acronym ACCEESSFMM stands for.</p> <p>A – Aesthetics - The appearance of a product</p> <p>C – Cost - The money paid to cover materials, equipment, labour, buildings and services so a product can be manufactured</p> <p>C – Customer - A single person or a target market group that a product or service is aimed at.</p> <p>E – Environment - The positive or negative impact a product may have on the environment. Including the materials and energy used for manufacturing.</p> <p>E – Ergonomics - the process of designing or arranging workplaces, products and systems so that they fit the people who use them. Body measurement data is used. (Anthropometrics)</p> <p>S – Safety - How safe a product is to manufacture and use</p> <p>S – Size - The physical dimension and measurement of a product and how appropriate it is for the user.</p> <p>F – Function - What a product does and how it works</p> <p>M – Manufacture - Techniques and processes used to manufacture/make a product.</p> <p>M – Materials - A resource used to manufacture a product.</p>	<p>Apply the terminology in evaluations and product testing.</p>

<p>Which ACCEESSFMM points are specific to this unit of work and know their individual definitions</p>	<p>Describe products in relation to these words/definitions.</p>
<p><b>Provenance - the place of origin, where food comes from.</b></p> <p><b>Seasonal – When certain foods are grown or slaughtered during a particular time of year (such as strawberries are picked during summer)</b></p> <p><b>Environment - The positive or negative impact a product may have on the environment. Including the materials and energy used for manufacturing.</b></p> <p>Food is imported from different parts of the world and the impact that this has on the environment.</p> <p>Food miles relate to the distance food is transported and that the further they travel the more pollution is created. This then has an affect on our planet and the environment.</p> <p>If we are to purchase foods which are locally sourced then it must be foods which are in season.</p> <p>There are different foods in season in spring, summer, autumn and winter.</p> <p>For example:</p> <p>Spring – grapefruit, rhubarb, spinach and watercress. Lamb and pork</p> <p>Summer – apricots, blackcurrants, nectarines, asparagus and lettuce. Lamb and pork.</p> <p>Autumn – blackberries, peaches, plums, aubergines, broccoli and carrots. Goose, grouse and guinea fowl.</p> <p>Winter - apples, clementines, sprouts and cauliflower. Goose, lamb, venison and pork</p> <p>In order to meet demand for the amount of food needed and for the public to access all fruits, vegetables and meats desired for our diets, these must be imported from other countries such as:</p> <p>Bananas from Costa Rica Tomatoes from Germany Fish from Russia Beef from Ireland Potatoes from Belgium</p>	<p>Reduce the carbon foot print regarding food miles. Identify the different foods which are in season and which foods must be imported due to the climate needed to grow them or to ensure demand is met.</p>
<p><b>Cuisine - a style or method of cooking, especially as characteristic of a particular country, region, or establishment</b></p> <p>British Cuisine consists of food which I grown and reared here in Britain. These include:</p> <ul style="list-style-type: none"> <li>● Potatoes</li> <li>● Strawberries</li> <li>● Apples</li> <li>● Carrots</li> <li>● Onions</li> <li>● Parsnips</li> <li>● Cauliflower</li> <li>● Cabbage</li> </ul>	<p>Identify locally grown and reared foods and what they are then served with.</p>

<ul style="list-style-type: none"> <li>• Beef</li> <li>• Chicken</li> <li>• Lamb</li> <li>• Pork</li> </ul> <p>British food is often served with sauce and vegetables such as gravy, horseradish and mint sauce. Main courses usually pair meat or fish with potatoes and other vegetables. Desserts consist of sticky toffee pudding and apple pie and may then be served with either ice cream or custard.</p>	
<p><b>Primary processing is where raw foods are picked, harvested or slaughtered and ready to either be eaten or cooked immediately.</b> For example, flour is made by milling wheat grains, milk is heat treated to kill bacteria.</p> <p><b>Secondary processing is when primary processed foods are turned into other food products by altering them in some way or combining them with other ingredients.</b> For example, Flour is turned into pasta, fruit is turned into jam.</p>	<p>Explain the difference between a primary and secondary processed food. Give examples of each to better explain.</p>
<p>Millions of tonnes of waste are thrown away each year. Households, food producers and retailers all contribute to the food waste. There are many reasons food is wasted such as overcooking food, not storing food correctly or not using it before the used by date. Food wastage can be reduced and the methods this can involve such as planning meals and portion sizes, using leftovers in future meals and donating unwanted foods to food banks.</p>	<p>Explain why the food waste is so bad. Identify the different ways it can be resolved.</p>
<p>People choose foods according to different factors such as lifestyle, income, PAL, food intolerance and allergies, enjoyment, seasonality, special occasions and healthy eating. There are other factors such as religious reasons and other ethical and moral reasons.</p>	<p>Explain the different reasons people choose certain foods. Identify the reasons people feel morally obligated to choose certain foods with regards to animals or organic produce.</p>
<p><b>Convection - Convection is the transfer of heat due to the bulk movement of molecules within fluids</b> <b>Conduction - the process by which heat is directly transmitted through the material of a substance when there is a difference of temperature between the 2 solids (such as the hob and a metal pan)</b> <b>Radiation - is the transmission of energy in the form of heatwaves through space or through a material (such as a grill)</b></p> <p>There are 3 different methods of heat transfer – conduction, convection and radiation. Conduction is the transfer of heat through solids, convection is the transfer of heat through liquid and radiation is the transfer of heat through waves of radiation. Cooking food can affect the nutritional content and the sensory properties. Each cooking method affects</p>	<p>Transfer heat using the 3 different methods and identify which one is used for cooking certain food, such as convection would be used to boil potatoes and explain how this works. Identify the different cooking methods and how they can affect sensory and nutritional properties.</p>

<p>food differently by reducing vitamin B groups and vitamin C. It can also reduce the amount of iron or calcium in food.</p>	
<p>That there are 3 different methods of cooking – dry, water and fat. Within these cooking methods there are many types such as for dry method there is dry frying.</p>	<p>Identify which foods would use which cooking methods. Explain the different cooking methods and how they work.</p>
<p>How you cook food can affect the nutritional content of the food such as frying vegetables in fat will increase the fat and decrease the number of vitamins and minerals. How you cook foods will also affect the texture and flavour of food.</p>	<p>Explain how different cooking methods will affect food with regards to flavour, taste, texture and nutritional value.</p>
<p><b>That denaturation and coagulation is a change in the protein of a food items such as eggs with either heat, acid or agitation. When this occurs, the proteins change in structure by straightening out and reforming into a solid by forcing the water out.</b> Denaturation can be reversed, unlike coagulation which is a permanent change. Protein molecules are made up of amino acids which unfold when heated, beaten or exposed to acidic foods.</p>	<p>Explain the process of denaturation and coagulation and the differences between them.</p>
<p>Shortening gives food a crumbly texture. When rubbing flour into butter this encases the flour granules with fat making them waterproof. This means that the dough cannot become stretchy and therefore remains 'short'.</p>	<p>Explain how shortening is used and what texture this will create.</p>
<p><b>Aeration is the means of incorporating air into a mixture.</b> When fats are beaten they trap air in the mixture and turns lighter in colour. This is what gives cakes their spongy and light texture. Aeration can be achieved using whisking and beating.</p>	<p>Make their swiss roll and the importance of aerating it during the mixing stage. Explain how aeration gives cakes their light and spongy texture.</p>
<p>There will be different culinary skills obtained during the practical lessons such as: Beating Frying Baking Chopping Bread making Food hygiene (cross contamination)</p>	<p>Chop safely and accurately. How to aerate cake mixtures to ensure a light and spongy texture. Fry safely without spitting from the pan Use an oven confidently Knead dough and know when it is ready to leave to prove or begin prepping for the oven. Use correct equipment for raw meat and how to prevent cross contamination.</p>

### Curriculum links to careers

Unit: All – Lesson completed at beginning of each term/rotation.

Term 1: Costume Designers - Film

Term 2: Food Nutritionist

Term 3: Electrician

Links: How careers across the industry link with the design process. Looking at the daily roles of specific people/careers and how their job is reliant on the iterative design process, an integral part of each project students' study in the rotation of D&T, textiles and food.

Outcome: Students identify links and explain how the employees work individually or as a team to meet the needs of the consumer/target market. Listing skills required for the role.