

<b>SUBJECT:</b>	<b>D&amp;T</b>	<b>YEAR GROUP:</b>	<b>8</b>
<b>PURPOSE OF STUDY</b>			
<p>Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.</p> <p>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.</p>			
<b>THE NATIONAL CURRICULUM FOR ART AND DESIGN AIMS TO ENSURE THAT ALL PUPILS:</b>		<b>NATIONAL CURRICULUM LINKS</b>	
<p>The national curriculum for design and technology aims to ensure that all pupils:</p> <ul style="list-style-type: none"> <li>• develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world</li> <li>• build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users</li> <li>• understand and apply the principles of nutrition and learn how to cook.</li> </ul>		<p><b>Design</b></p> <ul style="list-style-type: none"> <li>• use research and exploration, such as the study of different cultures, to identify and understand user needs.</li> <li>• identify and solve their own design problems and understand how to reformulate problems given to them.</li> <li>• develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations.</li> <li>• use a variety of approaches [for example, biomimicry and user-centred design], to generate creative ideas and avoid stereotypical responses.</li> <li>• develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools.</li> </ul> <p><b>Make</b></p> <ul style="list-style-type: none"> <li>• select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture.</li> <li>• select from and use a wider, more complex range of materials, components and ingredients, taking into account their properties.</li> </ul>	

	<p><b><u>Evaluate</u></b></p> <ul style="list-style-type: none"> <li>• analyse the work of past and present professionals and others to develop and broaden their understanding.</li> <li>• investigate new and emerging technologies.</li> <li>• test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups</li> <li>• understand developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists.</li> </ul> <p>Cross Curricular links:</p> <ul style="list-style-type: none"> <li>- (CC - Maths – proportion/quantities/ratio when mixing colours. Shapes/geometry when drawing - DT – shoe design, English –writing to evaluate and analyse. Geography and History – exploring local areas and cities across the world and Urban Art.)</li> <li>- History of art, craft, design and architecture, including periods, styles and major movements from ancient times up to the present day</li> <li>- – Architecture across the world and locally, industrialisation. English – writing to evaluate and analyse.)</li> <li>- English –writing to evaluate and analyse</li> </ul>
<p><b>TOPICS COVERED:</b></p>	
<ul style="list-style-type: none"> <li>• Bacterial food signage</li> <li>• Extended function of Macronutrients, Fats, Protein, Carbohydrates</li> <li>• Micronutrients – Vitamins and minerals, in a range of foods and snacks – Investigation into how many you are getting.</li> <li>• Health &amp; Hygiene</li> <li>• Knowledge of hygiene rules and regulations in relation to food preparation, production, and storage to prevent cross contamination.</li> <li>• Measuring, knife skills, and using the hob (boiling and simmering) to prepare and cook savoury rice with added balanced and calculated macronutrients.</li> <li>• Principles of food hygiene and safety, understand that some foods have a higher risk of food poisoning than others, e.g. raw meats, cooked rice dishes - cooking and storage.</li> <li>• Developing the use of knives, the kettle (hot water), and the hob. Explore the principles of food hygiene and safety, focusing on handling and cooking raw turkey, using knives and the grill.</li> <li>• Use knife skills for handling, preparing, and cooking raw turkey</li> <li>• Explore Mixing, portioning, shaping, and using the grill to prepare and cook turkey burgers (or vegetarian alternative).</li> <li>• Seasons of fruit and vegetables and how we source these out of season.</li> <li>• Growth of crops and names of vegetables and how they are grown in the UK and abroad.</li> </ul>	

- Continue to develop and demonstrate the principles of food hygiene and safety, focusing on using knife skills, grating and the oven during practical sessions.
- Learn about the term 'seasonality' and how to reduce the waste of fruit, vegetables, and bread in the home and at school.
- Research 'Too good to go' app and others to research how companies are reducing food waste.
- To investigate how and why food is wasted; suggest ways in which food waste can be reduced.
- Stop waste recipe - Use grating and cutting skills to make vegetable and corn fritters, using up old food and reducing waste to tasty food.
- Explore ways of cooking and presenting vegetables to make them more attractive and flavoursome.
- Develop skills of using the hob (boiling and simmering), following the all-in-one sauce method.
- Use the grill to prepare and cook tuna pasta bake (or vegetarian alternative) incorporating vegetables and sauce mixes.
- Explore micronutrients and why they are needed in the diet – what happens without them.
- Sources, types and functions of vitamins A, D, B-group (Thiamin, Riboflavin and Niacin) % C.
- Sources, types and functions of calcium, iron, and sodium.
- The process of gelatinisation in sauce making.
- What is Denaturing and Coagulation and how do we use it in cooking
- chilled lemon Flan investigation into practical denaturing – practical experience on individual versions.
- Reason for labelling of food goods as by law
- Traffic lighting analysis – when was it introduced and why. Can you traffic light a dish you are going to make
- Explore energy and explain why it is needed.
- To identify sources of energy in the diet and the effects they can have.
- Learn about how energy needs change throughout life and energy balance and imbalances.
- Continue to develop and demonstrate the principles of food hygiene and safety, focusing on handling eggs, using small pieces of electrical equipment and the hob/oven.
- To calculate the nutritional content information for a recipe and create a food label for a dish.
- Raising Agents Investigations and experimentation.
- Bicarbonate of soda and its uses in and out of cooking, toothpaste/cleaning products.
- Cream of Tartar how can we make and use it.
- Applying knowledge and raising agents to Preparing to make scones.
- Rubbing-in, forming and shaping a dough for savoury and sweet scones.
- Use the oven to successfully bake scones.
- Investigation in scones and Testing 3 CRAs to bake 3 different batches of scones. Which CRA gives a better raise, texture.
- Discover the functions of ingredients used in different bread making. Tear and Share, ciabatta, Naan.
- Explore varieties of bread and bread products available to the consumer.
- Learn about the sources, types, and functions of carbohydrate (including fibre).
- Be able to make at least two types of bread.
- To calculate the nutritional profile and compare the effect of using alternative ingredients.
- Consolidate and demonstrate knife skills, mixing, using the hob (frying), and assembling to prepare and cook fajitas (or vegetarian alternative)
- Consolidate and further develop the principles of food hygiene and safety, focusing on handling raw chicken, using knives and the hob.

- Learn about marinades and demonstrate the use of a marinade to enhance the flavour of a dish.
- Discover the function of fats in shortcrust pastry
- Investigation into fat and pastry making. Use of different fats and spreads and the effects they have on the pastry you make.
- Butter
- Vegetable
- Lard
- Oil
- Use the pastry
- Investigation to make a range of foods using varied fillings and flavours experimented with during the year.
- Explore the considerations necessary for preparing and serving a dish in a leisure venue.
- plan and create a recipe for a healthier main meal to be served in a leisure venue.
- Prepare designed dish of choice and serve to an invited member of staff

#### INTENT OF SUBJECT:

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. 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.

#### SKILLS OVERVIEW BY HALF TERM:

##### AUTUMN ONE

- Implement good food safety when handling, preparing, cooking, and serving food.
- Understand the process of keeping raw and cooked food separate to avoid cross-contamination.
- Understand and use bacterial food signage correctly
- Explain the principles of cleaning, preventing cross contamination, chilling, cooking food thoroughly and reheating food until it is steaming hot.
- Know that food safety means preventing contamination, spoilage, and decay when handling and storing food, so that it is safe to eat.
- Be able to use mixing, portioning, and shaping when making meat burgers.

##### AUTUMN TWO

- Implement good food safety when handling, preparing, cooking, and serving food.
- Understand the process of keeping raw and cooked food separate to avoid cross-contamination.
- Explain the principles of cleaning, preventing cross contamination, chilling, cooking food thoroughly and reheating food until it is steaming hot.
- Know that food safety means preventing contamination, spoilage, and decay when handling and storing food, so that it is safe to eat.
- To develop and demonstrate knife skills, grating and using the oven (baking) to prepare and cook frittata.

<ul style="list-style-type: none"> <li>• Understand and demonstrate food hygiene and safety, when handling and cooking raw turkey, using, knives and the grill to cook the meat.</li> <li>• Take part in practical tasks, follow instructions to make, bake, cook and prepare as required.</li> </ul>	<ul style="list-style-type: none"> <li>• Develop the principles of food hygiene and safety, focusing on handling eggs, using knives, grating and the oven.</li> <li>• Describe the functions of eggs in cooking.</li> <li>• Use the hob successfully (boiling and simmering), following the all-in-one sauce method.</li> <li>• Prepare 2 varying dishes using a range of vegetables.</li> <li>• Take part in practical tasks, follow instructions to make, bake, cook and prepare as required.</li> </ul>
<b>SPRING ONE</b>	<b>SPRING TWO</b>
<ul style="list-style-type: none"> <li>• Be able to apply current healthy eating recommendations to own diets.</li> <li>• Be able to apply an understanding of other people's needs to their own diet e.g., before and during pregnancy, breastfeeding, training, dieting.</li> <li>• Be able to understand how to maintain a healthy weight</li> <li>• Understand the relationship between diet and physical activity.</li> <li>• Explain the use of fit bits and smart watches and the impact on our fitness.</li> <li>• Explain how advertising, food availability and peer pressure affects our choice around healthy and unhealthy foods.</li> <li>• Explain the traffic light system and why it was brought in.</li> <li>• Know that food and drinks provide energy and nutrients in different amounts.</li> <li>• Understand the important functions of the body; and that people require different amounts of energy during their lives e.g., infant feeding, teenage years</li> <li>• Take part in practical tasks, follow instructions to make, bake, cook and prepare as required.</li> </ul>	<ul style="list-style-type: none"> <li>• Independently use a broad range of preparation techniques and methods when cooking, e.g., stir-frying, steaming, blending. ... use equipment safely, being aware of others.</li> <li>• Safety modifies recipes and cook predominantly savoury dishes that are based on current healthy eating messages.</li> <li>• Name, taste and prepare a broad range of ingredients and healthy recipes that reflect cultural diversity.</li> <li>• Select and use appropriate tools and equipment safely when preparing and cooking food.</li> <li>• Show clear understanding of how CRA's are used in cooking.</li> <li>• Be able to use CRA's effectively in arrange of recipes.</li> <li>• Demonstrate an increasing range of food preparation skills, e.g. accurate weighing and measuring, kneading.</li> <li>• Be able to calculate the nutritional profile and compare the effect of using alternative ingredients.</li> <li>• Take part in practical tasks, follow instructions to make, bake, cook and prepare as required.</li> </ul>
<b>SUMMER ONE</b>	<b>SUMMER TWO</b>
<ul style="list-style-type: none"> <li>• Know that food is produced, processed, and sold in different ways, e.g, conventional and organic farming.</li> <li>• Know about the different stages in food production and processing.</li> </ul>	<ul style="list-style-type: none"> <li>• Understand how a marinade is made and used and how it enhances flavour</li> <li>• Use correct skills in:</li> </ul>

- understand how geography, weather and climate influence the availability of food and drink.
- Consider the concept of sustainability and the impact of different choices on the environment.
- understand where and how a variety of ingredients are grown, reared, caught and processed.
- know the basic steps in producing food
- Know about the Healthy Schools movement for school dinner improvement.
- Know the function of protein in the body and a range of ways to cook protein.
- Understand the dietary needs of young people and how these can be modified.
- Apply knowledge of cooking protein to a range of recipes.
- Take part in practical tasks, follow instructions to make, bake, cook and prepare as required

- Mixing
- Frying
- Chopping
- Assembling and preparation.
- Present the principles of food hygiene and safety, by handling raw chicken successfully and safely.
- Know and explain the function of fats in pastry.
- Understand the use of different fats and spreads and the effects they have on the pastry you make.
- Be able to compare and contrast different fats in pastries using sensory methods, recipes, and practical practices.
- Be able to experiment with butter, oils, and lard.
- Be able to plan and create a menu to the specification explored in class.
- Prepare and cook a meal of choice based on skills developed during the year.
- Take part in practical tasks, follow instructions to make, bake, cook and prepare as required.