National Curriculum Key Stage 3 Design Technology / Food Technology (Rotations)

TITLE	COVERED IN OLD SCHEME?	WHERE IS IT COVERED IN THE NEW OVERVIEW?	ANY EXAMPLE OF GOING BEYOND NC? (If relevant)
DESIGN TECHNOLOGY			
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.	Yes	Year 7 Product Design – The Memphis clock project; Students research Memphis design and use this as inspiration to design 4 analogue clocks. Students choose their favourite design and make this using CADCAM, 2D Design and the laser cutter. Students then assemble components of an analogue clock kit to fit into their laser cut components. Year 8 Product Design – The board game project; Students research existing gameboards to understand the link between design and target markets. Students use the basic idea of snakes and ladders to design their own version. Students learn the graphic programme Serif DrawPlus to design and make their logo, gameboard and packaging graphics. Students use CADCAM, 2D Design and the laser cutter, to make their card packaging.	
Students should work in a range of domestic and local contexts; for example, the home, health, leisure and culture. Students should work in a range of industrial contexts; for example, engineering, manufacturing, construction, food, energy, agriculture (including horticulture) and fashion.	Yes	Year 7 Product Design – The Memphis clock project; Within this project, students are required to identify a target market and a specific room that they would like their clock to go. These details should impact the overall aesthetic and functionality of their designs. Students are also required to consider immediate trends/fashion to ensure their design would be saleable in the current climate. Year 7 Woodwork – The lego box project; Within this project, students are required to identify a target market, a specific room that they would like their box to go and to consider the use of storage. Students explore specific engineering and manufacturing details via joinery and material properties. Year 8 Product Design – The board game project; Within this project, students are required to identify a target market and to consider the common places and cultures in which gameboards are played. These details should impact the overall aesthetic and functionality of their designs. Students are also required to consider immediate trends/fashion to ensure their design would be saleable in the current climate. Students learn the importance of graphics and how manufacturing and	

		constructing a product this way relies heavily on detail and specific page hierarchy. Year 8 Woodwork – The mono speaker project; Within this project, students are required to identify a target market and consider the environment in which they image their speaker to go. Students explore specific engineering and manufacturing details via joinery and material properties. Students are introduced to electronics and solder a circuit board and manufacture housing for the electronic components to sit within a product. Students use CADCAM, 2D Design and the laser cutter, the make bespoke and fashionable speaker grills for their chosen target market.	
Students should select from and use a wider, more complex range of materials, components and ingredients, taking into account their properties and be using specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture.	Yes	Year 7 Product Design – The Memphis clock project; In this project, students use a combination of acrylic and MDF, alongside clock mechanisms. Students use CADCAM process to create & manufacture their designs, using the computer programme 2D Design and the laser cutter. Year 7 Woodwork – The Lego box project; In this project, students explore various materials and their properties (pine, oak, MDF, chipboard & acrylic), before manufacturing with pine and MDF. Students use traditional joinery techniques; marking out with try squares & rulers, cutting with tenon saws & bench hooks, and forming rebate joints to construct their boxes. Students learn about adhesives, using PVA glue for their rebate joints and impact adhesive during the assembly of their lids. Students also learn safe use of pillar drills and basic dowel jointing, alongside abrasives and simple painted finishes. Year 8 Product Design – The board game project; Students focus on the importance of Computer Aided Design (CAD) by learning the computer programme 'Serif Draw Plus'. Students construct packaging for their board game using corrugated cardboard and explore the properties and structural integrity of this material. Students also manufacture their own dice using pine, and their own playing counters using polymorph. Year 8 Woodwork – The mono speaker project; Students build on their previous joinery experience by creating a more complicated finger joint for their main speaker enclosure. Students also learn	

		about using temporary joints, in the form of screws, and how to drill pilot holes and countersinking. Students are introduced to electronics by soldering their speaker circuits together from kit form. They learn how to use soldering irons & associated equipment, and how to complete quality-control checks at all stages, looking for dry joints and ensuring components are inserted the correct way around. Students also further explore their CADCAM skills by creating customised grilles on 2D Design for the front of their speaker enclosures, laser cutting them from acrylic.	
Be able to identify and solve their own design problems and understand how to reformulate problems given to them.	Yes	Year 7 Product Design – The Memphis clock project; Students research existing examples of Memphis design and innovative clock design. Students choose their own target market and use a brief & specification to create four appropriate design ideas. Students refine these design ideas to solve problems arising from their original design idea. Year 8 Product Design – The board game project; Students research existing examples of board games. When designing their game, students need to encourage a new target market to play their game by introducing a new & exciting format that targets their interests or needs. Students will achieve this by profiling their target market and ensuring that their products meets their requirements.	Looking into historical design movements.
Understand how more advanced electrical and electronic systems can be powered and used in their products; for example, circuits with heat, light, sound and movement as inputs and outputs.	Yes	Year 8 Woodwork – The mono speaker project; Students research specific component functions as a homework project prior to the lesson, using a gap-fill based worksheet that is then used in class as part of a discussion & explanation of individual components and why they are required. Students discuss the functionality of speakers and the physics involved in the creation of sound.	
Students should test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups.	Yes	Year 7 Product Design – The Memphis clock project; Students peer-assess original design ideas and then develop these using the feedback they acquire. Students design to a client specification and use these targets to fully evaluate their final outcome. Students will test that their clocks are functioning and evaluate them aesthetically against their clients' requirements.	

		Year 8 Product Design – The board game project; Students will research existing solutions, taking inspiration from them and presenting these ideas for consideration against their client specifications. Students will consider these specification requirements throughout the design & manufacturing process, and will evaluate their products against them upon completion, alongside peer reviewed feedback.	
FOOD TECHNOLOGY			
Understand and apply the principles of nutrition and health	Yes	Year 7 **Theory lessons - Healthy breakfasts, nutritional requirement of the body.** Students will focus on the basic nutritional requirements of the body. They will research and identify the different nutrient groups, their sources and function in the body. Students will find out about the importance of maintain a balanced diet for good health. Year 7 **Practical lessons**; Students will develop an understanding of how to increase their nutritional health by adding, removing and substituting ingredients when making dishes such as: Pizza, Vegetable Cous Cous, Breakfast muffins, Pasta splodge and Oat and raisin cookies. Year 8 **Theory lessons - Eatwell plate, Nutrients, Obesity, Fat, sugar, salt and calorie intake.** Students will develop an understanding of a range of nutritional guidelines that will help them understand how to increase their nutritional health and reduce their Saturated fat, Salt and Sugar intake. They will research and identify nutritional intake requirements and form a sound understanding of the importance of the correct daily calorie intake to help maintain a healthy body weight. Year 8 **Practical lessons**; Students will further develop their nutritional awareness of healthy dishes by applying this knowledge and cooking the following dishes: Pizza, Pasta bake, Stir- fry, Healthy fruit pudding, Filled Pitta.	
Cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet	Yes	Year 7 **Practical lessons**; Students will learn and develop a range of skills in the kitchen allowing them to become confident cooks by preparing and cooking the following dishes: Apple crumble, Cheese scones, Scone based pizza, Vegetable Cous Cous, Breakfast muffins, Pasta splodge, Oat and raisin cookies, Bread rolls, Spiced apple pudding, Bolognese, Salad designs, Shortbread. Year 8 **Practical lessons**; Students will build on and continue developing a range of skills in the kitchen allowing them to become confident cooks by preparing	

		and cooking the following dishes: Bread rolls, Savoury flavoured rolls, Pizza, Soda bread, Chelsea buns, Pasta from scratch, Pasta bake, Stir fry, Rhubarb streusel, Toad in the hole, Chicken Curry, Lebkuchen.	
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]	Yes	**Year 7 and Year 8 Practical and theory lessons combined**; Students will learn and develop their preparation and cooking skills by preparing and cooking a range of dishes using the following techniques: Knife skills – bridge and claw method, use of ovens and hobs – boiling, simmering, sweating vegetables, baking. Sensory analysis. Adjusting taste with seasoning. Combining, kneading and shaping of bread. Creating their own recipes – Salad designs and healthy fruit pudding.	Using a budget when shopping. Understanding how to select the best value for money when shopping.
Understand the source, seasonality and characteristics of a broad range of ingredients	Yes	**Year 7 Mini project on food waste;** Students will research and develop an understanding of the issue of food waste as a national and global problem. Through team work they will research the statistics and put together an action plan identifying how we can all reduce food waste and why this is so important to help combat climate change. They will be encouraged the present and debate their findings as a class. **Year 8 Mini project looking at Local, seasonal and organic food;** Students will research and develop an understanding of the term 'Local Food.' They will identify a range of foods produced locally as well as researching the farming techniques to produce this food through intensive and organic methods. They will develop an understanding of the importance of supporting local businesses producing local food as well as the benefits to the environment. Students will produce a short research project on a range of locally grown foods such as beef, potatoes and soft fruit.	Environmental impact of impacts of food waste The benefits to the environment of food production – local and organic.