WADE DEACON HIGH SCHOOL

Key Stage 3 Curriculum Journey: Design Technology

Through a variety of creative and practical activities, the curriculum in design technology will teach pupils the knowledge, understanding and skills needed to engage in an iterative process of designing and making.
The Food Preparation and Nutrition curriculum will teach pupils good knowledge of **food**, **food preparation** and cooking to achieve and maintain a healthy, balanced **diet**.

YEAR 7 CURRICULUM JOURNEY

	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Topic					 	 
	Graphics – Presentation Techniques & Intro to the Monster Project	Timber – Monster Project	Timber – Monster Project	Introduction to Food Preparation	Food Around the World	Fair Trade
Key Knowledge, Skills & Understanding	**Knowledge** ➢ Colour Theory ➢ Layout design ➢ Textures **Skills** ➢ Design strategies ➢ Rendering & tonal shading ➢ Sketching and colour application	**Knowledge** ➢ 6 R's ➢ Names of tools and processes for working with timber ➢ Health & Safety **Skills** ➢ Coping saw ➢ Tenon saw ➢ Pillar drill ➢ Band facer	**Knowledge** ➢ Timber finishes ➢ Names of tools and processes for finishing plastics ➢ Evaluation ➢ How to shape/form and finish plastics **Skills** ➢ Strip heater ➢ Painting ➢ Cross and DrawFiling	**Knowledge** ➢ The importance of a healthy and varied diet as depicted in the eat well plate and eight tips for healthy eating ➢ Health and safety in the kitchen when preparing food. **Skills** ➢ Select and prepare ingredients ➢ Use utensils ➢ Apply heat in different ways	**Knowledge** ➢ Where different food comes from around the world and the impact of importing foods (food miles) **Skills** ➢ Select and prepare ingredients ➢ Use utensils ➢ Apply heat in different ways	**Knowledge** ➢ How food is processed and sold in different ways, e.g. fair trade ➢ How to store, prepare and cook food safely and hygienically **kills** ➢ Select and prepare ingredients ➢ Use utensils ➢ Apply heat in different ways ➢ Evaluate the food they have produced sensory analysis.
KS3 National Curriculum Links	➢ Develop and communicate design ideas using annotated sketches	➢ Use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture. ➢ Considering their properties, use a wider, more complex range of materials and components.	➢ Use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture. ➢ Considering their properties, use a wider, more complex range of materials and components.	➢ Cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet	➢ Understand the source, seasonality and characteristics of a broad range of ingredients. ➢ Cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet	➢ cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet
MAPs	1 x MAP per half term. Graphics MAP	1 x MAP per half term. Timber theory MAP	1 x MAP per half term. Practical MAP	1 x MAP per half term. Health & Safety MAP	1 x MAP per half term. Practical MAP – Bolognaise	1 x MAP per half term. Carbon Footprint and Food Miles MAP

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Key Stage 3 Curriculum Journey: (Subject)

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YEAR 8 CURRICULUM JOURNEY

	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Topic						
	Design Technology - Textiles	Design Technology – Clock Project	Design Technology – Paper & Boards	Food Preparation & Nutrition - Macronutrients	Food Preparation & Nutrition – Food & the Environment	Food Preparation & Nutrition – British Cuisine
Key Knowledge, Skills & Understanding	**Knowledge** ➢ Categories of textiles - manmade and natural textiles ➢ Different weaves are applied to fabrics. ➢ Properties of natural and synthetic fabrics **Skills** ➢ Stitching techniques ➢ Applique	**Knowledge** ➢ Sustainable impact of timbers ➢ Names of tools and processes for working with timber & acrylic ➢ Health & Safety **Skills** ➢ Coping saw ➢ Tenon saw ➢ Pillar drill ➢ Band facer ➢ Painting ➢ Sublimation Printing	**Knowledge** ➢ how paper is made ➢ The different types of paper & board and their uses. ➢ computer-aided design – 2D Design ➢ Computer-aided manufacture – laser cutter **Skills** ➢ Cutting and scoring ➢ Model making ➢ CAD	**Knowledge** ➢ That food provides energy and nutrients in different amounts; that they have important functions in the body; and that people require different amounts during their life. ➢ How to taste and cook a broader range of ingredients and healthy recipes, accounting for a range of needs, wants and values. **Skills** ➢ Adapt and use their own recipes. ➢ Cook a range of dishes. ➢ Select and prepare a larger range of ingredients	**Knowledge** ➢ Students should know that food is processed and sold in different ways, e.g. conventional and organic farming. ➢ How to taste and cook a broader range of ingredients and healthy recipes, accounting for a range of needs, wants and values. **Skills** ➢ Use a wider range of utensils and electrical equipment ➢ How to apply heat in different ways ➢ Use taste, texture and smell to decide how to season dishes	**Knowledge** ➢ People choose different types of food that may be influenced by availability, season, cost, where the food is produced, culture and religion. ➢ How to taste and cook a broader range of ingredients and healthy recipes, accounting for a range of needs, wants and values. **Skills** ➢ How to apply heat in different ways ➢ How to use taste, texture and smell to decide how to season dishes and combine ingredients.
KS3 National Curriculum Links	➢ Develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling ➢ Test, evaluate and refine ideas and products against a specification, considering the views of intended users.	➢ Use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture. ➢ Use a wider, more complex range of materials and components considering their properties.	➢ Use specialist tools, techniques, processes, equipment and machinery precisely ➢ Use a wider, more complex range of materials and components, considering their properties	➢ Cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet ➢ Understand and apply the principles of nutrition and health	➢ Understand the source, seasonality and characteristics of a broad range of ingredients. ➢ Cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet	➢ Understand the source, seasonality and characteristics of a broad range of ingredients.
MAPs	1 x MAP per half term. Textiles Theory	1 x MAP per half term. Design MAP	1 x MAP per half term. Paper & Board Theory	1 x MAP per half term. Macronutrients MAP	1 x MAP per half term. Food & the Environment MAP	1 x MAP per half term. Practical MAP

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Key Stage 3 Curriculum Journey: Design Technology

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YEAR 9 CURRICULUM JOURNEY

	Half Term 1	Half Term 2	Half Term 3	Half Term 4	Half Term 5	Half Term 6
Topic						
	DT – Designer Movements	Design Technology – Mechanisms	Design Technology - CAD	FPN - Microorganisms and Micronutrients	FPN – Nutritional Needs Food Spoilage	FPN – International Cuisine
Key Knowledge, Skills & Understanding	**Knowledge** ➢ Research and exploration, such as the study of different cultures, to identify and understand user needs ➢ Categories of plastics - be able to describe thermoplastics and thermosetting plastics ➢ Sustainable impact of plastics ➢ **Skills** ➢ Develop and communicate design ideas using annotated sketches ➢ Produce 3D models ➢ Use CAD/CAM equipment	**Knowledge** ➢ Use learning from maths and science to help design and make products that work. ➢ Understand how more advanced mechanical systems used in their products enable changes in movement and force. ➢ Analyse products through disassembly to determine how they are constructed and function. **Skills** ➢ Produce a 3D working prototype ➢ Communication and teamworking	**Knowledge** ➢ Learn about the industry standard computer aided design program to create professionally finished concepts **Skills** ➢ Use CAD to design and products, increasing standards of quality, scale of production and precision.	**Knowledge** ➢ The principles of cleaning, preventing cross-contamination, chilling, cooking food thoroughly and reheating food until it is steaming hot **Skills** ➢ How to use a broader range of preparation techniques and methods when cooking, e.g. stir-frying, steaming, and blending. ➢ How to modify recipes and cook dishes that promote current healthy eating messages.	**Knowledge** ➢ The importance of energy balance and the implications of dietary excess or deficiency, e.g. malnutrition, maintenance of a healthy weight. (micronutrients) **Skills** ➢ How to use a broader range of preparation techniques and methods when cooking, e.g. stir-frying, steaming, and blending. ➢ How to evaluate the food they have produced using a range of sensory analysis techniques.	**Knowledge** ➢ How to use nutrition information and allergy advice panels on food labels to help make informed food choices. ➢ Students should know how to compare the cost of food when planning to eat out or cook at home. **Skills** ➢ How to competently use a range of cooking techniques for example, selecting and preparing ingredients; using utensils and electrical equipment.
KS3 National Curriculum Links	➢ Use research and exploration to identify and understand user needs ➢ Identify and solve design problems and understand how to reformulate problems ➢ analyse the work of past and present professionals and others to develop and broaden understanding	➢ Select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture ➢ Understand how more advanced mechanical systems used in their products enable changes in movement and force	➢ Use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided design ➢ Identify and solve design problems and understand how to reformulate problems	➢ 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 ➢ 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 ➢ 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 ➢ Understand the source, seasonality and characteristics of a broad range of ingredients.
MAPs	1 x MAP per half term. Sustainability MAP	1 x MAP per half term. CAM's MAP	1 x MAP per half term. Design MAP	1 x MAP per half term. Micronutrients MAP	1 x MAP per half term. Carbohydrates MAP	1 x MAP per half term. Practical MAP – Students choice to showcase skills

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