	Gatsby Benchmark 4 - Linking Curriculum Learning to Careers **Gatsby Benchmark 5 - Encounters with employers and employees** **Gatsby Benchmark 6 - Experiences of workplaces**	**September 2021 – July 2022**

	AUTUMN	**SPRING**	**SUMMER**
		7	
Activity	**Steady Hand Game** Design, Make, Evaluate, Build Technical Knowledge. • Identification of a user group • Drawing up a specification • Introduction to electronic systems circuits and components • Using CAD to plan and simulate circuits • Using flowcharts to understand and break down systems • Practical construction of an electronic circuit • Generation of a range of design ideas • Using CAD / CAM to realise a final product/ component • Evaluating a completed product.	**Mix It Up** Design, Make, Evaluate, Build Technical Knowledge. • Introduction to CAD • Generating design ideas • Working to tolerances • Perspective drawing (1/2 Point) • Isometric drawing • Paper engineering • Kinetic spreads • Mechanisms	**Food And Nutrition** Preparation, Hygiene, Science**,** Provenance, Technical Knowledge 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.
Outcome	Awareness of pathways and links to careers such as: Product designer, Electrical engineer/Designer. Systems analyst, Quality controller, CNC operator/programmer.	Awareness of pathways and links to careers such as: Product Designer, Graphic designer, Architect, Illustrator, Technical author.	Awareness of pathways and links to careers such as:Nutritional aide, Food service associate, Nutrition assistant, Caterer, Chef, Baker, Health coach, Nutritionist, Food technologist, Dietitian
		Year 8	
Activity	**Make Time** Design, Make, Evaluate, Build Technical Knowledge • Formulating a design brief and specification • Using applied mathematics in design	**Thermometer** Design, Make, Evaluate, Build Technical Knowledge	**Food and Nutrition** Preparation, Hygiene, Science**,** Provenance, Technical Knowledge

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	• Composite materials theory. • Multi component design. • Producing multiple design proposals. • Dimensioning. • CAD/CAM. • Assembling multiple components • Uses and properties of adhesives • Surface finishes • Evaluating a completed product • Schematic drawings • Further studies of maths in D&T.	• Formulating a brief for a specific user group • Understanding and using flowcharts to represent effective orders of sequence • Representing real world situations With flowcharts • Understanding and programming PIC microcontrollers • Identifying the uses of a range of electronic components. • Producing nets and developments • Develop sketching and drawing techniques to represent a final idea	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.
Outcome	Awareness of pathways and links to careers such as: Product designer, CNC operator/programmer. Graphic designer, Conceptual designer.	Awareness of pathways and links to careers such as: Product designer, Electrical engineer/Designer. Systems analyst, Quality controller, CNC operator/programmer.	Awareness of pathways and links to careers such as:Nutritional aide, Food service associate, Nutrition assistant, Caterer, Chef, Baker, Health coach, Nutritionist, Food technologist, Dietitian
Year 9			
	Design and Technology Product Design	**GCSE Food and Nutrition**	
Activity	Theoretical and practical studies into: New and emerging technologies Energy generation and storage Developments in new materials Systems approach to designing Mechanical devices Materials and their working properties.	Theoretical and practical work on: • Basic hygiene • Knife skills • Sauce making, • Food preparation • Macronutrients, • Healthy eating • Analysis of nutritional content.	

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Outcome	Awareness of pathways and links to careers such as: Product Design, Industrial Design, Graphic Design, Engineering, Architecture, Advertising, Construction, Manufacturing, Interior Design, Marketing, Quantity Surveying, Armed Forces and Sales.	Awareness of pathways and links to careers such as:Nutritional aide, Food service associate, Nutrition assistant, Caterer, Chef, Baker, Health coach, Nutritionist, Food technologist, Dietitian	
Year 10			
Activity	• Selection of materials or components • Forces and stresses • Ecological and social footprint • Sources and origins • Using and working with materials • Stock forms, types and sizes • Scales of production • Specialist techniques and processes • Surface treatments and finishes.	Theoretical focus will be on: • food nutrition and health, • food science, food safety, • food choice and food provenance. • Students will continue to prepare a wide range of dishes to support their understanding and continue to develop core skills and refine practical technique.	
Outcome	Awareness of pathways and links to careers such as: Product Design, Industrial Design, Graphic Design, Engineering, Architecture, Advertising, Construction, Manufacturing, Interior Design, Marketing, Quantity Surveying, Armed Forces and Sales.	Awareness of pathways and links to careers such as:Nutritional aide, Food service associate, Nutrition assistant, Caterer, Chef, Baker, Health coach, Nutritionist, Food technologist, Dietitian	
Year 11			

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Activity	Identifying and investigating design possibilities • Producing a design brief and specification • Generating design ideas • Developing design ideas • Realising design ideas • Analysing & evaluating	Task 1: Food investigation: Students' understanding of the working characteristics, functional and chemical properties of ingredients. Practical investigations are a compulsory element of this task. Task 2: Food preparation assessment: Students' knowledge, skills and understanding in relation to the planning, preparation, cooking, presentation of food and application of nutrition related to the chosen task. Students will prepare, cook and present a final menu of three dishes within a single period of no more than three hours, planning in advance how this will be achieved.	
Outcome	Awareness of pathways and links to careers such as: Product Design, Industrial Design, Graphic Design, Engineering, Architecture, Advertising, Construction, Manufacturing, Interior Design, Marketing, Quantity Surveying, Armed Forces and Sales.	Awareness of pathways and links to careers such as: Nutritional aide, Food service associate, Nutrition assistant, Caterer, Chef, Baker, Health coach, Nutritionist, Food technologist, Dietitian	
Year 12			
Activity	Theory topics are delivered through a range of design and make projects with the addition of: Features of manufacturing industries, Designing for maintenance and the cleaner environment, Current legislation,		

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	Information handling modelling and forward planning Further processes and techniques.		
Outcome	Awareness of pathways and links to careers such as: Product Design, Industrial Design, Graphic Design, Engineering, Architecture, Advertising, Construction, Manufacturing, Interior Design, Marketing, Quantity Surveying, Armed Forces and Sales.		
Year 13			
Activity	• Independent design and make project including: • Client generated brief and therefore on a real world design need. • Comprehensive, focused and detailed research into the problem. • Design a creative range of solutions. • Fully develop a plausible and marketable solution. • Manufacture a high quality final product. • Rigorous testing and evaluation.		
Outcome	Awareness of pathways and links to careers such as: Product Design, Industrial Design, Graphic Design, Engineering, Architecture, Advertising, Construction, Manufacturing, Interior Design, Marketing, Quantity Surveying, Armed Forces and Sales.		