St George's School
Design and Technology Department
Year 8 Curriculum Map for D&T and FOOD

	Unit 6	Unit 7	Unit 8	Unit 9
THE BIG IDEAS & KNOWLEDGE *Overview of topics or key questions*	Make it memorable - how do we design effective merchandise to commemorate a visit to an attraction. This unit focuses on developing students' visual communication skills by focusing on using polymers and paper based products to develop a graphic based product for ZSL or another attraction.	How do we begin to use a range of materials and processes to create highly effective solutions to problems? This unit focuses on developing students' designing and prototyping skills by working with polymers, timbers and sheet metal to increase the breadth of processes learnt from year 7 with more skill, challenge and processes to learn.	Make it fit - How do we design textiles based prototypes for other users This unit focuses on developing students' knowledge of fabric based material. Students will learn how to use the sewing machines to strengthen and connect fabrics together & develop printing/embellishment methods for personalising the product they design.	Food science and nutrition. Students will develop their knowledge and skills from Year 7
SKILLS & STRATEGIES *Procedural knowledge, literacy and numeracy skills*	• Know where paper comes from and how this is converted from trees into paper. • Know the standard paper sizes in the A series. • Know how to apply a finish to different paper and boards. • Know how and when to use different drawing styles to generate design ideas and develop them. • Know how to use tools on a computer graphics program to develop realistic design ideas. • Know that printing uses 4 colours to create the full colour spectrum. • Know how and why we use offset lithography to mass produce printing. • Be able to explain and use a heat transfer press. • Be able to use and evaluate Laser cutting compared with traditional manufacturing. • Know how to set up CAD files to be laser cut. • Know why we layplan materials for manufacturing on a computer-numerically controlled	• Know that timber is converted from tree's by logging, seasoning, and converting into a standard stock form. • Know that timber comes in radial, straight or quarter sawn and what this means for defects of the timber. • Know where different types of timbers are grown around the world. • Know the effects of deforestation on our planet. • Know how to use a range of measuring and marking out tools and remove materials to a tolerance of +/-2mm. • Know how to adapt their planning in case something goes wrong with their practical work. • Know how to apply a range of finishes to timber. • Know that plastics originate from crude oil and transformed into plastics through fractional distillation.	• Know key material properties of fabrics i.e. absorbency; drape. • Know how fibres and fabrics are categorised and their origins. • Know the names of each part of the sewing machine and how to set one up. • Know the differences between stitch types and their applications. • Know how to use a range of embellishment techniques i.e. block print, applique, batik, embroidery; repeat pattern. • Know how to create fabric based components and begin to assemble. • Know how to evaluate a final prototype against a design specification. • Know ethical issues surrounding fast fashion and the rights of workers.	• Know and identify key personal hygiene rules. • Analyse food practicals using sensory words. • Plan and prepare a range of dishes using the eatwell guide. • Understand social, moral and ethical issues surrounding food such as food miles, food waste and packaging. • Be able to identify food sources that are rich in specific macronutrients i.e. protein rich foods. • Explain why proteins, carbohydrates and fats are important in a balanced diet. • Know how to safely use a range of equipment i.e. food processors, electric whisks etc.

	manufacturing device. I.e. CNC	• Know that plastics come in a standard stock form. I.e. sheet, pellets, profiles. • Know how to create a template for marking out onto acrylic. • Know how to use a range of marking out tools. • Be able to shape acrylic using templates, jigs etc. • Be able to polish acrylic to a high standard		
FEEDBACK *Noteworthy tasks and assessments*	Analysing design context Studying the work of other designers Designing & Communicating ideas Evaluating.	Technical knowledge of materials and processes Practical Testing Products	Design brief and specification Design ideas and communication Prototyping Practical Evaluation	Food practicals Knowledge of food science.
BREADTH *Opportunities, trips, wider reading, cultural capital*	Graphic design styles, innovation in packaging design; sustainable packaging design initiatives.	Manufacturing technologies and advancements in bio-polymers.	User centered fashion and design. Innovations in textile design.	Food provenance; food waste and food miles.
KEY VOCABULARY *Important words and phrases*	Balance, alignment; gutters; colour theory; laser cutting; nets; die cutting	Polymers; seasoning; conversion; deforestation; managed forests; FSC;	Non-woven and woven fabrics; Weaving; printing methods; block; half drop repeats.	Macronutrients; balanced diets; proteins; carbohydrates; sugars; fats.