



St George's School
Design and Technology Department
Year 9 Curriculum Map for D&T and FOOD

	D&T	D&T	Food
THE BIG IDEAS & KNOWLEDGE <i>Overview of topics or key questions</i>	<p>This module introduces students into their first foray into D&T capability, by building upon the knowledge and skills from Year 7 and 8. Students will study iterative design processes focussed on problem resolving of their choice based on the context of "Table Top Products". Students will be expected to apply a range of communication techniques to manufacture a suitable prototype to test and evaluate.</p>	<p>Festival Hats</p> <p>This unit looks at developing a fashion accessory related to a music festival. Students will continue to learn knowledge and skills whilst developing their capability within D&T. Students will be expected to apply a range of communication techniques to manufacture a suitable prototype to test and evaluate. Students will develop skills and knowledge of basic pattern cutting for clothing</p> <p>Healthcare</p> <p>This unit looks at how we can use crumble to program systems, 3D CAD to design complex products and graphics software to produce app interfaces. Utilising athletes and exercise as a context in order to design and prototype a solution to support athletes/sportspeople training for an event.</p>	<p>This term introduces students to a range of cultural food topics as well as food science topics. Students will focus on learning about Italian, North African, British and American food and culture and explore making a range of dishes with more advanced techniques. In Food science students will learn about the role and function of ingredients in the dishes they cook and what happens to these when they are changed.</p>
SKILLS & STRATEGIES <i>Procedural knowledge, literacy and numeracy skills</i> Procedural knowledge - know how Disciplinary knowledge - how facts are true Propositional - Know that Substantive - fact.	<p>Know how to gather target market data and present these as graphs and tables.</p> <p>Know how to link research into a design brief and specification.</p> <p>Know how to sketch in 2D and 3D and apply colour, textures and shade.</p> <p>Know how to use physical models to develop an innovative solution.</p> <p>Know how to produce a manufacturing specification.</p> <p>Use a range of specialist tools, processes and materials to create and assemble components.</p> <p>Know how to select an appropriate finish and apply to a range of materials.</p> <p>Know how to test and evaluate a product using a range of criteria and methods.</p>	<p>Know that pattern cutting is a process used in the fashion industry to create a range of garments.</p> <p>Know how to research a theme and use this to generate design ideas.</p> <p>Use toiles to develop patterns for festival textiles based products.</p> <p>Employ user centred design strategies to develop innovative design solutions.</p> <p>Know where natural fabrics come from and how these are converted to usable stock forms.</p> <p>Be able to use a sewing machine and adjust the settings for appropriate stitches.</p> <p>Know how papers and boards are used to develop prototypes for architectural solutions.</p> <p>Be able to present research in a graphical manner.</p> <p>Use a range of sketching and illustration techniques to develop prototypes.</p> <p>Know how a flexographic printing machine works and the names of each part.</p> <p>Use modelling techniques to develop an innovative prototypes</p>	<p>Know a range of Italian food dishes.</p> <p>Know how to knead dough and be able to make a range of pasta dishes.</p> <p>Know alternatives to pastas i.e. gnocchi.</p> <p>Know different types of flour i.e. durum and how they differ from wheat flour.</p> <p>To be able to explain the role and function of raising agents, i.e. air, bicarbonate of soda etc.</p> <p>Know where ingredients come from and why they are incorporated into local dishes.</p> <p>Know how to safely use more complex kitchen equipment i.e. food processors for creating spice pastes.</p>

		Know how to apply scale to drawings as well as objects. Be able to plan in 2D and 3D.	
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FEEDBACK <i>Noteworthy tasks and assessments</i>	Research; Brief & Specification; Design & Develop; Practical; Testing & Evaluation	Research; Brief & Specification; Design & Develop; Practical; Testing & Evaluation	Evaluation of practical work Food Science and knowledge of ingredients.
BREADTH <i>Opportunities, trips, wider reading, cultural capital</i>	Study of new technologies to replace existing manufacturing technology. Study of how technology & products have developed through history.	Study of fashion trends and sub -cultures. Study of graphics based technologies.	Study of cultural cooking i.e. roots of italian food and food provenance. Examine how and why food is presented in certain equipment.
KEY VOCABULARY <i>Important words and phrases</i>	Forces; material types, lathes, design thinking, user centred design.	Anthropometrics; ergonomics; scale; pattern cutting;	Coagulation; denaturation;