Curriculum Mapping: Design & Technology -Year 8

Year 8 - Design & Technology	Food & Nutrition	Product Design	Product Design	DT - Textiles	Core Skills
	Diet & Nutrition	**Global Challenge**	**User centred design**	**Manufacturing**	**Biomimicry**
	Concepts/Tier 3 vocabulary ***Carbohydrates, protein, fats and micronutrients, nutritional needs of a teenager, science of bread making, focaccia planning, food and the environment, evaluation of a dish. Egg fried rice, chicken fajitas, muffins, spaghetti Bolognese, focaccia bread, fish fingers.***	***Concepts/Tier 3 vocabulary*** ***Model making, accuracy, use of scale, complex nets, modelling materials, ratio, paper and board types, properties, material uses, paper and board unit measurements, prototype, millimeters, microns, grams per square metre. Climate change, global warming, extreme weather events, users needs.***	***Concepts/Tier 3 vocabulary*** ***User centred design, project brief, product analysis, function, aesthetics, size, materials, environment. Needs and wants, specification, safety. Softwood, hardwood, manufactured wood, acrylic, strip heating finishes. Design ideas, modelling. Marking out, try square, tenon saw, coping saw, bench hook, pillar drill, plywood, evaluation.***	***Concepts/Tier 3 vocabulary*** ***Synthetic fibres, disassembly of a garment, sewing machine, presser foot, bobbin, needle, take up lever, selector buttons, seams, zigzag stitch, straight stitch, paper pattern, garment design, care labels, ironing.***	***Concepts/Tier 3 vocabulary*** ***Nature, biomimicry, model making, scale, accuracy, design ideas, design influences, card, foamboard, paper, craft knife, cutting mat, millimeters, measuring, nets and problem solving.***
	Justification: Pupils develop their practical making skills through cooking a range of dishes: *Egg fried rice, chicken fajitas, muffins, spaghetti Bolognese, focaccia bread, fish fingers.* Pupils will gain knowledge in the types of nutrients in food reinforcing the Eatwell guide, hygiene when storing and cooking food, the impact of food on the environment. The theory will be reinforced with practical lessons. This gives pupils access to valuable life skills. .	***Justification:*** Pupils will work in teams to solve a global contextual challenge via the production of a concept prototype. Gaining knowledge of our role as designers to produce products that can solve challenges faced by society. This will enable pupils to develop skills in inclusive, ethical, cultural, and environmental design. Developing practical making skills through the production of a scale model of a shelter made from card and paper-based materials with the emphasis on working accurately in millimetres using rulers and craft knives.	***Justification:*** Pupils develop their practical making skills through the production of a phone holder made from plywood, woods and acrylic using the scroll saws, drills, hand tools and marking out tools such as the try square. They will experience joining wood and adding finishes. Pupils will gain knowledge of designing for a specific user, product analysis, design ideas, design development, wood types, properties and uses, woodworking tools, strip heating and evaluating their own designs. This enables pupils to experience the whole design cycle process.	***Justification:*** Pupils develop their practical making skills through the production of a drawstring bag on the sewing machine. They will use given patterns to cut out their fabric to gain an understanding of how products are constructed. Pupils will gain knowledge of synthetic fibres, via disassembly seam allowance, why garments need care labels, how a sewing machine works, is threaded, and used. This provides pupils with skills and knowledge to support their studies at GCSE and A Level.	***Justification:*** A 3-lesson core skills exercise where pupils will work individually to produce design ideas and a concept prototype. Developing and applying making skills from previous projects across KS3. Pupils will gain knowledge of our role as designers to produce products that are influenced by a certain stimulus, in this instance, nature. They will also gain an understanding of how previous product designers have used influences from nature to solve engineering challenges.
	Assessment: *Pupils are assessed at the end of each rotation on their making and designing skills and given a grade. Grades for each rotation are tracked across the year and averaged to generate an overall progress grade for DT.*				

Wider reading/Cultural capital

We run a KS3 Food and Textiles club afterschool once a week for pupils to apply their skills further and produce a range of products outside of the curriculum. We endeavour to build in real life examples of topics/products to enable pupils to relate their learning to situations they understand using videos, pictures, and discussion. Pupils are encouraged to continue their understanding of why design matters via programmes such as: Made in Britain and Big Life Fix. Year 7 pupils are also invited to attend our annual summer exhibition to view the work of our GCSE and A-level pupils. ***Wider reading includes****: The Elements of pop up by James Diaz, Restore by Will Kirk, My Sewing Machine by Jane Bull, The Design of Everyday Things by Donald A. Norman, Eatwell and Feel Great: The Teenagers Guide to Nutrition and Health by Tina Lond-Caulk*