

Subject : Design & Technology		Key Stage 3 Curriculum Map	
You will study different subject areas in D&T every 7-8 weeks at key stage 3 (subjects: Food, Textiles, Product Design, Systems & Control, Technical Graphics)			
	Year 7	Year 8	Year 9
What am I learning?	I will learn about the design contexts. I will be able to use research include the study of different cultures to understand user need. I will learn to analyse a product and produce a description of all the features and suggest improvements and rank them. I will write a basic design specification.	I will learn to analyse an existing product and suggest improvements and justify my decisions. I will write a specification that considers many parts such as environmental, aesthetic, cost, maintenance, quality and safety (ACCESS-FM). I will break down a design context into smaller components.	I will learn to break down the design context into many parts and consider the domestic, local and industrial influence of a specific context. I will write a specification with measurable metrics that have justifications
Why am I learning this?	I will be able to classify materials by structure. I will know about the physical properties of materials like flexibility, elasticity, malleability and thermal. I will make simple use of planning tools and show the understanding of health and safety.	I will be able to select a material because I have thought about how good they can be for my design. I able to use a range of hand tools, machinery including CAM. I will know how to order the sequence of schedules for manufacturing products they design detailing resources required.	I will be able to apply H&S and risk assessments to a practical session. I will able to use a range of hand and power tools to complete practical work select materials because they are for example water proof or stiff, compliant, tough or hard. I can use a wide range of manufacturing techniques including handcraft and machinery to make. I will know how to adjust settings of equipment and machinery such as sewing and drilling machines.
How will I be supported?	Sentence starters Scaffolding Modelling through practical focused tasks(PFT) Interactive tasks	Sentence starters Scaffolding Modelling through practical focused tasks(PFT) Interactive tasks	Sentence starters Scaffolding Modelling through practical focused tasks(PFT) Interactive tasks
How will I be challenged?	Higher ability working with different materials to identify material properties. Challenging with testing and evaluation skills	Higher ability working with different materials to identify material properties. Challenging with iterative design process.	Higher ability working with different materials to identify material properties. Challenging with iterative design process.

Subject : Design & Technology		Year 10 Curriculum Map				
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
What am I learning?	<p>You will undertake an introductory project where you will learn about the design process. You will develop your skills in drawing and sketching and learn design theory, which will cover, Industry & Enterprise, Ecological and Social Footprint, People, culture and society, Production techniques & systems</p> <p>Communication of design ideas.</p>	<p>You will learn how to code microcontrollers, and design and make products in a range of materials including textiles, timber, metals & alloys. You will use software to simulate electronic circuits, and design and test your ideas in CAD software such as Tinker-cad and Sketch-up. You will learn the following theory: Energy storage, Energy generation, modern and smart materials, composite and technical textiles. Electronic systems</p>	<p>You will design and make products made from polymers, fabrics and metals. You will learn about the work of other designers and this includes influential design companies from the past and present. You will also learn about paper and boards, natural & manufactured timbers, metals and alloys, polymers, textiles, forces and stresses and improving the functionality of products.</p>	<p>You will design and make products from timber-based materials. You will learn how to design to meet the needs and wants of target markets. You will design and make a product using electronic components. You will learn about the following theory; Ecological and Social footprint, the 6Rs, scale of production, timber (sources and origins) and the working properties of timber.</p>	<p>You will begin your non-examination assessment (NEA), set by the examination board. The design tasks will be available in the first week of June. You will be applying all your design skills acquired from the previous projects to the NEA. Timber, metals and polymers studied in more detail and the commercial processes covered through a series of practical activities.</p>	<p>You will undertake the first sections of the NEA task. Investigate and analyse the design context in detail. You will work independently to complete these two tasks. Research into the problem will start in this term. You will continue this task during the summer holidays, ready to continue when you return. Revision and retrieval of previous theory covered will commence.</p>

<p>Why am I learning this?</p>	<p>To learn how to draw competently and understand the fundamentals and basics.</p>	<p>To know and understand how electronic and mechanical systems work so that you can apply the technology in a practical manner in your projects.</p>	<p>To learn how to design and make products from a range of materials using the design process as a tool for solving problems.</p>	<p>To understand how design decisions affects the environment and how designers can reduce the impact on the environment.</p>	<p>To learn how to undertake research to investigate a design problem. Know how to apply the properties and characteristics of materials practically.</p>	<p>Know how to carry out primary and secondary research methods.</p>
<p>How will I be supported?</p>	<p>Sentence starters Scaffolding Modelling through practical focused tasks(PFT) Interactive tasks Exam flash cards Revision books Retrieval activities</p>	<p>Sentence starters Scaffolding Modelling through practical focused tasks(PFT) Interactive tasks Exam flash cards Revision books Retrieval activities</p>	<p>Sentence starters Scaffolding Modelling through practical focused tasks(PFT) Interactive tasks Exam flash cards Revision books Retrieval activities</p>	<p>Sentence starters Scaffolding Modelling through practical focused tasks(PFT) Interactive tasks Exam flash cards Revision books Retrieval activities</p>	<p>Sentence starters Scaffolding Modelling through practical focused tasks(PFT) Interactive tasks Exam flash cards Revision books Retrieval activities</p>	<p>Sentence starters Scaffolding Modelling through practical focused tasks(PFT) Interactive tasks Exam flash cards Revision books Retrieval activities</p>
<p>How will I be challenged?</p>	<p>Higher ability working with different materials to identify material properties. Challenging with testing and evaluation skills. Provide tiered tasks that are challenging and allow you to create sophisticated outcomes.</p>	<p>Higher ability working with different materials to identify material properties. Challenging with testing and evaluation skills. Provide tiered tasks that are challenging and allow you to create sophisticated outcomes.</p>	<p>Higher ability working with different materials to identify material properties. Challenging with testing and evaluation skills. Provide tiered tasks that are challenging and allow you to create sophisticated outcomes.</p>	<p>Higher ability working with different materials to identify material properties. Challenging with testing and evaluation skills. Provide tiered tasks that are challenging and allow you to create sophisticated outcomes.</p>	<p>Higher ability working with different materials to identify material properties. Challenging with testing and evaluation skills. Provide tiered tasks that are challenging and allow you to create sophisticated outcomes.</p>	<p>Higher ability working with different materials to identify material properties. Challenging with testing and evaluation skills. Provide tiered tasks that are challenging and allow you to create sophisticated outcomes.</p>

Subject : Design & Technology				Year 11 Curriculum Map		
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<p>What am I learning?</p>	<p>You will continue to research the problem that you must solve in the NEA task. You will complete a product analysis, undertake a client interview, complete online research. Write a specification and conclusion of research. Write a design brief. You will revise unit 1 of core technical principles and complete series of revision and retrieval tasks.</p>	<p>You will generate design ideas for the NEA task. You will also create sketch models, annotate and label them. You will use design iteration as a process for developing your ideas with ergonomics and anthropometrics applied to the design process. You will revise unit 2 of the core technical principles.</p>	<p>You will be planning the making of your prototype including the selection of materials and tools. You will manufacture your prototype. You will then evaluate and test your product against your written specification. You will be revising the special technical principles and design principles section</p>	<p>Completion of the NEA and revise for the written exam. NEA deadline-hand in.</p>	<p>Continue to prepare for the written exam. Sit the exam.</p>	

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