

Year 7 Curriculum Map: Products to aid

Year 7 Designers will take part in three DT lessons per fortnight, for three half terms of the year. The project will be delivered in two parts, Phase one will be predominantly theory and design, phase two will be focused on practical work and evaluation.

What are we learning about? What skills & attitudes are we developing? What are we making?	Key vocabulary we will be using in written work and when talking about our work:	Links to national curriculum:
<p>WHAT ARE WE LEARNING?</p> <p>Designers will be developing a prototype of a 'product to aid'. The 'Products to aid' project is centred around learning and applying the iterative design process and user centred design.</p> <p>We will be using lots of new vocabulary, aswell as learning how to build rapid prototypes, using lots of different materials and workshop equipment.</p> <p>Designers will work through each stage below: Brief, analysis, design ideas, modelling, testing, evaluating & modification.</p> <p>WHAT SKILLS AND ATTITUDES ARE WE DEVELOPING?</p> <p>Designers will use empathy to create a product concept that would truly assist a person of their choosing in any capacity they desire.</p> <p>User centred design and the iterative design process are both models used in industry, they require critical thinking, empathy, resilience, problem solving skills and lots of creativity.</p> <p>Designers will also learn the value in the process, rather than a focusing on a perfectly finished product.</p>	<p>Iterative design process & user centred design</p> <p>Brief, analysis, design ideas, modelling, testing, evaluating & modification</p> <p>Sketch & annotation</p> <p>Anthropometrics & ergonomics</p> <p>Function, performance, user & material requirements,</p> <p>Sustainability</p> <p>Cost</p> <p>Safety considerations</p> <p>Feedback forum</p> <p>Material properties, timber, polymers, metals, papers and boards, textiles</p>	<p>DESIGN</p> <p>(D1) Use research and exploration, such as the study of different cultures, to identify and understand user needs. (D2) Identify and solve their own design problems and understand how to reformulate problems given to them. (D3) Develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations. (D4) Use a variety of approaches to generate creative ideas and avoid stereotypical responses. (D5) Develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools.</p> <p>MAKE</p> <p>(M1) Select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture. (M2) Select from and use a wider, more complex range of materials, components and ingredients, taking into account their properties.</p> <p>EVALUATE</p> <p>(E1) Analyse the work of past and present professionals and others to develop and broaden their understanding (E3) Test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups</p> <p>TECHNICAL KNOWLEDGE</p> <p>(TK1) Understand and use the properties of materials and the performance of structural elements to achieve functioning solutions.</p>

