



Topic Name	Term	Skills Developed	Link to NC Subject Content	Next link in curriculum	Other Notes
<ul style="list-style-type: none"> Graphics Introduction Health and Safety introduction <p>Pupils introduced to the workshop and how to conduct themselves in this environment. Identification of tools, machinery, safety points and room conduct. Graphics introduction. Presentational skills and creative skills to design new and innovate products. Introduction to the chocolate project. Generating ideas to suit the demands of a charity or organisation.</p>		<ul style="list-style-type: none"> Production of a room plan, identifying machinery and safety points Demonstrate creative skills, Application of walking on the wild side and 50 circles exercise Risk taking with graphics, mistakes are good, design has no formal rules Designers are not artists Product analysis with six thinking hats Understanding how charities work and how they raise funds through merchandising 	<ul style="list-style-type: none"> Use a variety of approaches, such as biomimicry and user-centred design, to generate creative ideas develop and communicate design ideas using annotated sketches, 	<ul style="list-style-type: none"> All sessions that require the workshop/tools and processes 	
<ul style="list-style-type: none"> Product Analysis Mathemstical Application <p>Mould demonstration, investigate the features of a good and bad mould. Examples of moulds used. Investigation to find out how chocolate bars are manufactured in industry. Strong focus upon the packaging and legal information contained within packaging.</p> <p>Chocolate bar product analysis activity including calculating the cost per gram.</p>		<ul style="list-style-type: none"> Identification of key parts of a chocolate mould Understanding problem areas with moulds and finer detail Understanding how rotational moulding manufactures hollow chocolate shapes Batch production techniques and production planning times Understanding the functions of packaging including demonstrating knowledge of barcode, weights, symbols, branding, logos, royal warrants, materials, printing process, fair trade and general history of chocolate packaging Applying mathematical skills to fins the price per gram, using maths to make informed decisions. 	<ul style="list-style-type: none"> Develop and communicate design ideas using mathematical modelling. Understand developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers and technologists 	<ul style="list-style-type: none"> All design-based projects at KS3 require analysis. Costing and power consumption, linking to the unit electricity in Physics. 	
<ul style="list-style-type: none"> Vacuum Forming Demonstration <p>Vacuum forming demonstration. Pupils will be introduced to the vacuum forming machine and the range of plastics used. Pupils to learn about how the machine</p>			<ul style="list-style-type: none"> 	<ul style="list-style-type: none"> Year 10 PD 	



<p>operates in preparation of them using the machine in subsequent lessons.</p>				
<p>Packaging students are required to design the packaging of their chocolate bar including the manufacturing costings. Pupils should refer back to the product analysis session.</p>		<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • <p>Computer room required and access to PACKLANE</p>
<p>• Practical Session – Mould manufacture Moulding design and vacuum forming practical session. Some groups may have the opportunity to use the laser cutter to make their own mould shapes depending upon room allocation, this would feed into the phone holder project Other learners will use or make their shapes and formers from a prescribed topic/theme.</p>		<ul style="list-style-type: none"> • Select appropriate moulding tools • Ability to select the correct polymer • Demonstrate team work when using the vacuum former • Safely remove moulds and preparing for chocolate pouring and photographing 	<ul style="list-style-type: none"> • 	<ul style="list-style-type: none"> • Year 10 PD
<p>• Evaluation and Modifications Testing, evaluating and modifications. Learn how to test their practical work and make informed decisions to suggest improvement and modification to the design and manufacture. Compare against the specification and original design challenge. How successful would this chocolate product be in the open market?</p>		<ul style="list-style-type: none"> • Application of testing, devising a testing strategy, how easy is the chocolate to remove from the mould • Extending the product range • Apply analytical skills • Engage in peer assessment, including SWOT and six thinking hats • Suggest and make improvements • Consider and address consumer concerns over sustainability and fair trade 	<ul style="list-style-type: none"> • Test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups 	<ul style="list-style-type: none"> • More detailed evaluation skills will be developed in the phone holder project. <p>Important to note that evaluation skills are critical at all stages of the design process.</p>



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Curriculum Map – Year 7 – Product Design