

*Year: 8 DT carousel*

*Subject: Design and Technology/Food*

<b>Materials</b>		
Overarching Topic:		
What has come before and what comes later:	<p>During Year 7, students developed knowledge of materials and processes and demonstrate skill producing a board of skills. They got to experience, casting and worked with hand tools (chisel, Tenon/coping saws/hand drills/files, pop rivet gun) as well as machinery (belt sander, pillar drill, scroll saw)</p> <p>Students will rotate each term to experience materials, graphic materials and food technology.</p> <ul style="list-style-type: none"> <li>• Materials rotation – students develop knowledge of materials and processes and demonstrate skill producing an LED light. Pine wood jointed base and light up acrylic top designed and produced using CAD/CAM.</li> <li>• Graphic materials - students develop knowledge of graphics design/make processes and demonstrate skill via the production of a board game, packaging and games pieces.</li> <li>• Food Technology – Students to develop knowledge and skills of food hygiene, preparation and demonstrate practical skills. Knowledge focus on vitamins, minerals, proteins and carbohydrates.</li> </ul>	
	Core	Extension
The Big Questions (What questions will students be able to answer upon mastery of the topic?)	<ul style="list-style-type: none"> <li>• What has been the positive environmental impact of miniaturisation?</li> <li>• What has been the negative environmental impact of miniaturisation?</li> <li>• How have mobile phones (SMART phone) reduced our need to purchase additional products?</li> <li>• What impact have mobile phones had on the environment?</li> <li>• Demonstrate and explain how to mark out accurately in wood.</li> </ul>	<ul style="list-style-type: none"> <li>• How/why has miniaturisation been achieved? Responses to include development of the microchip/integrated controller's/battery technology.</li> </ul> <p><b>Practical - Finger joint used in the construction of the light base.</b></p>

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	<ul style="list-style-type: none"> <li>• Demonstrate and explain how to produce a finger joint with precision.</li> <li>• Demonstrate and explain how to create a simple LED circuit.</li> <li>• Explain what lighting options are available and what would best suit certain environments.</li> <li>• Explain the environmental impact of single use batteries.</li> <li>• Why are LEDs becoming a popular alternative to traditional filament light bulbs?</li> <li>• Outline the advantages of designing using CAD.</li> <li>• Identify the best method of joining varying wooden products together.</li> <li>• Explain the importance of applying finishes to products.</li> </ul>	
	Skill/Technique	How students will develop and demonstrate this
Key skills	<p>Marking out and cutting out Butt, lap and finger joints using correct tools and equipment.</p> <p>Soldering a complete LED circuit that works and able to trouble shoot own problems.</p> <p>CAD -Designing own designs/vectorising images and using templates</p>	<ul style="list-style-type: none"> <li>• Through the successful manufacture of an LED light.</li> </ul>

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Graphic Materials		
Overarching Topic:		
What has come before and what comes later:	<p>In year 7, students developed knowledge of materials and processes and demonstrated skill producing a range of graphic products (blockhead character and packaging). Students got to experience 2D and 3D CAD software as well as use graphic design hand tools/equipment (craft knife, safety rule, cutting board, scissors, laminator).</p> <p>Students will rotate each term to experience materials, graphic materials and food technology.</p> <ul style="list-style-type: none"> <li>Materials rotation – students develop knowledge of materials and processes and demonstrate skill producing an LED light. Pine wood jointed base and light up acrylic top designed and produced using CAD/CAM.</li> <li>Graphic materials - students develop knowledge of graphics design/make processes and demonstrate skill via the production of a board game, packaging and games pieces.</li> <li>Food Technology – Students to develop knowledge and skills of food hygiene, preparation and demonstrate practical skills. Knowledge focus on vitamins, minerals, proteins and carbohydrates.</li> </ul>	
	Core	Extension
The Big Questions (What questions will students be able to answer upon mastery of the topic?)	<ul style="list-style-type: none"> <li>Demonstrate and explain how to create accurate designs using 2D design.</li> <li>Explain the importance of knowing your target user when designing.</li> <li>Explain the importance of product analysis when designing new products.</li> <li>Why and how are barcodes used?</li> <li>How is colour used in the promotion of products?</li> <li>What are the key features you would expect to see on a piece of packaging and why?</li> <li>What is the importance of using grid/step lock on 2D design?</li> <li>Explain/demonstrate how to design and make a board game using 2D design.</li> </ul>	<ul style="list-style-type: none"> <li>What is sustainability and why is it important?</li> </ul>

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	Skill/Technique	How students will develop and demonstrate this
Key skills	Using tools accurately and for the correct process Use of Desk Top Publishing Use of Illustrator	<ul style="list-style-type: none"><li>• By practicing a range of processes and producing a range of promotional products to reflect the skills taught.</li><li>• Knowledge evidenced through Q&amp;A and on worksheets</li></ul>

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<b>Food</b>		
Overarching Topic:		
What has come before and what comes later:	<p>In year 7, student's development knowledge and understanding basic food hygiene and demonstrate practical skills producing fruit salad, soup, pasta bolognaise, and muffins.</p> <p>Students will rotate each term to experience materials, graphic materials and food technology.</p> <ul style="list-style-type: none"> <li>• Materials rotation – students develop knowledge of materials and processes and demonstrate skill producing an LED light. Pine wood jointed base and light up acrylic top designed and produced using CAD/CAM.</li> <li>• Graphic materials - students develop knowledge of graphics design/make processes and demonstrate skill via the production of a board game, packaging and games pieces.</li> <li>• Food Technology – Students to develop knowledge and skills of food hygiene, preparation and demonstrate practical skills. Knowledge focus on vitamins, minerals, proteins and carbohydrates.</li> </ul>	
	Core	Extension
The Big Questions (What questions will students be able to answer upon mastery of the topic?)	<ul style="list-style-type: none"> <li>• What factors would cause a food to be class as high risk (food hygiene)?</li> <li>• What different ways can we use eggs in cooking?</li> <li>• Explain what happens to food when they are in the danger zone.?</li> <li>• Outline the risks to health of an unbalanced diet.</li> </ul>	<ul style="list-style-type: none"> <li>• What is coagulation in food and what factors can affect the speed of coagulation?</li> </ul>

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	<ul style="list-style-type: none"> <li>• Outline the impact of vitamin and calcium deficiencies in your diet.</li> <li>• Explain and demonstrate how to make a white sauce.</li> <li>• Explain and demonstrate the rubbing in method to produce a product.</li> <li>• Explain and demonstrate the mixing in method to produce a product.</li> <li>• Explain how you would evaluate food and what senses would be required and why?</li> </ul>	
	Skill/Technique	How students will develop and demonstrate this
Key skills	<ul style="list-style-type: none"> <li>• Cutting</li> <li>• Browning</li> <li>• Sauces</li> <li>• Rubbing and mixing methods</li> </ul>	Skills demonstrated in the making of <ul style="list-style-type: none"> <li>• Fish fingers</li> <li>• Pasta Bake</li> <li>• Scones/crumble</li> </ul>

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