



## Design Technology

**Year 7 (Carousel system between 3D Design, Food and D&T changing each term)**

Autumn Term DT	Spring Term 3D	Summer Term Food
<p><b>Half Term 1</b></p> <ul style="list-style-type: none"> <li>• Clock Project.</li> <li>• Health and Safety.</li> <li>• Timber and their properties.</li> <li>• Workshop tools and equipment.</li> <li>• Skills test.</li> <li>• Area and units of measure.</li> <li>• Manufacturing with timber.</li> <li>• The Memphis group.</li> <li>• Finishes and adhesives.</li> <li>• Designers and their work.</li> <li>•</li> </ul>	<p><b>Half Term 1</b></p> <ul style="list-style-type: none"> <li>• Design brief and task analysis.</li> <li>• Paper, board and their properties.</li> <li>• Research (product analysis/internet based).</li> <li>• Marketing and enterprise.</li> <li>• CAD/CAM.</li> <li>• Safe use of craft knives.</li> <li>• Development of ideas.</li> </ul>	<p><b>Half Term 1</b></p> <ul style="list-style-type: none"> <li>• Production plans.</li> <li>• Hygiene, Health and safety in the food room.</li> <li>• Safe use of the oven.</li> <li>• Creaming method.</li> <li>• Use of the food probe.</li> <li>• Handling raw meat.</li> <li>•</li> </ul>
<p><b>Half Term 2</b></p> <ul style="list-style-type: none"> <li>• Safe use of workshop tools and equipment.</li> <li>• Working with timber.</li> <li>• Exploded working drawing.</li> <li>• Structures.</li> </ul>	<p><b>Half Term 2</b></p> <ul style="list-style-type: none"> <li>• Technical drawing. (Isometric and one-point perspective)</li> <li>• Typography.</li> <li>• Target market</li> <li>• Design sketching.</li> <li>• Packaging, symbols and nets. - Paper engineering.</li> <li>• Finishing techniques.</li> <li>• Evaluation</li> </ul>	<p><b>Half Term 2</b></p> <ul style="list-style-type: none"> <li>• Weighing and measuring.</li> <li>• Ambient foods.</li> <li>• Nutrition.</li> <li>• Safe use of the grill.</li> <li>• Safe use of knives/chopping skills.</li> <li>• Rubbing in method.</li> </ul>

**Year 8 (Carousel system between 3D Design, Food and D&T changing each term)**

Autumn Term	Spring Term	Summer Term
<p><b>Half Term 1</b></p> <ul style="list-style-type: none"> <li>• Keyring Project.</li> <li>• Sustainability.</li> <li>• Task analysis</li> <li>• Plastics and their properties.</li> <li>• Health and Safety.</li> <li>• Workshop tools and equipment.</li> <li>• CAD/CAM.</li> </ul>	<p><b>Half Term 1</b></p> <ul style="list-style-type: none"> <li>• Client/user centred design</li> <li>• Writing a design brief and task analysis.</li> <li>• The work of Jon Burgerman.</li> <li>• Product development</li> <li>• Biomimicry in design.</li> <li>• Annotation</li> </ul>	<p><b>Half Term 1</b></p> <ul style="list-style-type: none"> <li>• Safe use of the oven.</li> <li>• Rubbing in method.</li> <li>• Food hygiene.</li> <li>• Functionality and product testing.</li> <li>• Safe use of the hob.</li> <li>• Product development – heathy alternatives.</li> </ul>

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<ul style="list-style-type: none"> <li>• Designers and their work.</li> </ul>		
<b>Half Term 2</b>	<b>Half Term 2</b>	<b>Half Term 2</b>
<ul style="list-style-type: none"> <li>• Safe use of workshop tools and equipment.</li> <li>• Working with polymers (acrylic).</li> <li>• CAD/CAM – laser and vinyl cutter.</li> <li>• Finishes/vinyl stickers/wrapping.</li> <li>• CAD/CAM – 2D design and laser cutter.</li> <li>• Basic circuits.</li> <li>• Systems and control.</li> <li>• Product development.</li> <li>• Conductors and insulators.</li> <li>• Mechanisms.</li> <li>• Forces and stresses.</li> </ul>	<ul style="list-style-type: none"> <li>• Textiles and their properties.</li> <li>• Specification</li> <li>• Production plan</li> <li>• Manufacturing with textiles – sewing techniques.</li> <li>• Evaluating against specification.</li> </ul>	<ul style="list-style-type: none"> <li>• Making bread dough.</li> <li>• Cooking times.</li> <li>• Kneading.</li> <li>• Food preparation.</li> <li>• Product development.</li> <li>• Health and hygiene.</li> <li>• Weighing and measuring.</li> </ul>

**Year 9 (Carousel system between 3D Design, Food and D&T changing each term)**

Autumn Term	Spring Term	Summer Term
<b>Half Term 1 (D&amp;T)</b>	<b>Half Term 1 (Food)</b>	<b>Half Term 1 (3D)</b>
<ul style="list-style-type: none"> <li>• Environmental issues /Sustainability.</li> <li>• Energy generation.</li> <li>• CAD/CAM.</li> <li>• Materials Investigation.</li> <li>• Scales of production.</li> <li>• Technical drawing.</li> <li>• Materials and their properties.</li> <li>• Wow zone exam question on timber.</li> </ul>	<ul style="list-style-type: none"> <li>• Health, safety and hygiene.</li> <li>• Safe use of the cooker.</li> <li>• Slab cake.</li> <li>• Chopping skills.</li> <li>• Fruit Salad.</li> <li>• Function of ingredients.</li> <li>• Safe use of equipment.</li> <li>• Creaming method.</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction to Keith Haring</li> <li>• WoW Zone activity.</li> <li>• Drawing skills.</li> <li>• Development skills.</li> <li>• Modelling skills.</li> <li>• Safe use of the craft knives.</li> <li>• Artist theory.</li> </ul>
<b>Half Term 2 (D&amp;T)</b>	<b>Half Term 2 (Food)</b>	<b>Half Term 2 (3D)</b>
<ul style="list-style-type: none"> <li>• Maths principles.</li> <li>• Wood joints.</li> <li>• Manufacturing with accuracy using tools and equipment.</li> <li>• Concrete / composite materials.</li> <li>• Metals / Pewter Cast.</li> <li>• Smart materials.</li> </ul>	<ul style="list-style-type: none"> <li>• Safe use of the hob.</li> <li>• Fruity flapjacks.</li> <li>• Pizza.</li> <li>• Weighing and measuring.</li> <li>• Cottage Pie.</li> <li>• Rubbing in method.</li> <li>• Cookies.</li> <li>• Combining ingredients.</li> </ul>	<ul style="list-style-type: none"> <li>• Card/corrugated cardboard and it's properties.</li> <li>• Layering.</li> <li>• Abstract movement.</li> <li>• Use of coping saws.</li> <li>• Composition.</li> <li>• Paint application.</li> <li>• Acrylic and watercolour techniques.</li> </ul>

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- Mark making.

## Year 10

Autumn Term	Spring Term	Summer Term
<p style="text-align: center;"><b>Half Term 1</b></p> <ul style="list-style-type: none"> <li>• Begin Design &amp; Make (D&amp;M - mixed media storage covering multitude of production processes) – research and design ideas.</li> <li>• Technical drawing.</li> <li>• <b>New and emerging technologies</b></li> <li>• Industry &amp; Enterprise/D&amp;M.</li> <li>• Sustainability &amp; the Environment /D&amp;M.</li> <li>• People, Culture &amp; Society / D&amp;M.</li> </ul>	<p style="text-align: center;"><b>Half Term 1</b></p> <ul style="list-style-type: none"> <li>• Smart Materials.</li> <li>• Composite Materials.</li> <li>• Technical Textiles.</li> <li>• Systems Approach to Designing.</li> <li>• Electronic systems processing.</li> <li>• Mechanical devices.</li> <li>• Completion of Design &amp; Make (mixed media storage) – manufacturing, processes and CAM.</li> </ul>	<p style="text-align: center;"><b>Half Term 1</b></p> <ul style="list-style-type: none"> <li>• Common specialist technical principles.</li> <li>• Forces and stresses.</li> <li>• Improving functionality.</li> <li>• Ecological and social footprint.</li> <li>• The 6 R's.</li> <li>• Scales of production.</li> <li>• Maths principles.</li> </ul>
<p style="text-align: center;"><b>Half Term 2</b></p> <ul style="list-style-type: none"> <li>• Production, Techniques &amp; Systems / D&amp;M.</li> <li>• Informing Design Decisions / D&amp;M.</li> <li>• <b>Energy, materials, systems and devices.</b></li> <li>• Energy Generation / D&amp;M .</li> <li>• Energy Storage.</li> <li>• Modern Materials.</li> <li>• Completion of Design &amp; Make (mixed media storage) – modelling and CAD.</li> </ul>	<p style="text-align: center;"><b>Half Term 2</b></p> <ul style="list-style-type: none"> <li>• <b>Materials</b></li> <li>• Working with Timber, polymers, textiles, Paper &amp; Board.</li> <li>• Commercial Manufacturing.</li> <li>• Surface Treatments &amp; Finishes.</li> <li>• <b>Designing and making principles</b></li> <li>• Investigation into Primary &amp; Secondary Data / D&amp;M.</li> <li>• The Work of Others / D&amp;M.</li> <li>• Design Strategies.</li> <li>• Selection of Materials &amp; Components / NEA development.</li> <li>• Tolerances / NEA development.</li> <li>• CAD.</li> <li>• Materials Management / NEA.</li> <li>• Completion of Design &amp; Make (mixed media storage).</li> </ul>	<p style="text-align: center;"><b>Half Term 2</b></p> <ul style="list-style-type: none"> <li>• Start of NEA.</li> <li>• No practical.</li> <li>• Research section.</li> <li>• Introduction of client.</li> <li>• Context and exploration of the task.</li> <li>• Existing product research.</li> <li>• Design brief and specification.</li> </ul>

## Year 11

Autumn Term	Spring Term	Summer Term
<p style="text-align: center;"><b>Half Term 1</b></p> <ul style="list-style-type: none"> <li>• Analysis of ideas</li> <li>• 6Rs and sustainable design.</li> <li>• NEA – Designing.</li> <li>• Modelling NEA.</li> <li>• Modelling &amp; Evaluation.</li> <li>• Development.</li> </ul>	<p style="text-align: center;"><b>Half Term 1</b></p> <ul style="list-style-type: none"> <li>• NEA Making &amp; Photo Diary.</li> <li>• Evaluation &amp; Final Client Interview User.</li> <li>• Testing &amp; Improvements.</li> </ul>	<p style="text-align: center;"><b>Half Term 1</b></p> <ul style="list-style-type: none"> <li>• NEA completion.</li> <li>• AO1 revision.</li> <li>• AO2 revision.</li> <li>• AO3 revision.</li> </ul>
<p style="text-align: center;"><b>Half Term 2</b></p> <ul style="list-style-type: none"> <li>• Selection of Materials &amp; Components / NEA development.</li> <li>• Tolerances / NEA development CAD.</li> <li>• Materials Management / NEA.</li> <li>• Design Analysis &amp; Client Feedback.</li> <li>• Tools, Equipment, Techniques &amp; Finishes / NEA Final Model Development / CAD.</li> <li>• Treatment &amp; Finishes / Final Model Development.</li> <li>• Materials Investigation.</li> <li>• Manufacturing Plan / Manufacturing Spec.</li> <li>• MOCK EXAM.</li> </ul>	<p style="text-align: center;"><b>Half Term 2</b></p> <ul style="list-style-type: none"> <li>• NEA Making &amp; Photo Diary.</li> <li>• Evaluation &amp; Final Client Interview User.</li> <li>• Testing &amp; Improvements.</li> </ul>	<p style="text-align: center;"><b>Half Term 2</b></p> <ul style="list-style-type: none"> <li>• AO1 revision.</li> <li>• AO2 revision.</li> <li>• AO3 revision.</li> </ul>