

**Curriculum Subject: Design Technology**

	<b>Autumn 1</b>	<b>Autumn 2</b>	<b>Spring 1</b>	<b>Spring 2</b>	<b>Summer 1</b>	<b>Summer 2</b>
<b>YEAR 7</b>	<b>Smart Key Fobs</b>	<b>Woodpecker Project</b>	<b>Woodpecker Project</b>	<b>Night Light Project</b>	<b>Night Light Project</b>	<b>Night Light Project</b>
	<ul style="list-style-type: none"> <li>• Sketching</li> <li>• Health and Safety</li> <li>• <i>Properties of Polymers (Malleability)</i></li> <li>• Thermosetting and Thermoforming</li> </ul>	<ul style="list-style-type: none"> <li>• Writing a Design Brief</li> <li>• Select and use specialist equipment</li> <li>• Using Tools independently</li> <li>• <i>Wood types and properties</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Properties of Woods</i></li> <li>• Working with Softwood</li> <li>• Using specialist machinery</li> <li>• Evaluating</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Communication of Ideas 1</i></li> <li>• 3D Sketching with annotation</li> <li>• User needs</li> <li>• Isometric drawing</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Computer Based Tools</i></li> <li>• Using CAD</li> <li>• <i>Measurement and Production Aids (Jig)</i></li> <li>• Working with Jigs</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Manufacturing Electronic Sysytems</i></li> <li>• Working with electrical components</li> <li>• Soldering</li> <li>• Testing</li> </ul>
<b>YEAR 8</b>	<b>Speaker Project</b>	<b>Speaker Project</b>	<b>Desk Tidy Project</b>	<b>Desk Tidy Project</b>		
	<ul style="list-style-type: none"> <li>• Product Analysis</li> <li>• Writing a Specification (ACCESSFM)</li> <li>• Drawing Ideas in Isometric</li> <li>• Properties of wood, glues and adhesives</li> </ul>	<ul style="list-style-type: none"> <li>• Making material choices</li> <li>• Stock forms, type and sizes</li> <li>• Measurements, dimensions and tolerances</li> <li>• Circuit assembly</li> </ul>	<ul style="list-style-type: none"> <li>• Make functioning and appealing products</li> <li>• Using wider range of making processes</li> <li>• Using engineering drawings</li> <li>• Independent use of making processes</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Ensuring Accuracy</i></li> <li>• Understanding tolerances</li> <li>• Wasting processes by hand</li> <li>• Addition processes vinyl</li> </ul>		
<b>YEAR 9</b>	<b>Pewter Jewellery Project</b>	<b>Pewter Jewellery Project</b>	<b>Sustainable T Shirt Project</b>	<b>Educational Toy</b>	<b>Educational Toy</b>	<b>Educational Toy</b>
	<ul style="list-style-type: none"> <li>• <i>Work of others - Biomimicry</i></li> <li>• User-centred design</li> <li>• <i>Properties of metals</i></li> <li>• Draw ideas using CAD</li> </ul>	<ul style="list-style-type: none"> <li>• Understanding moulds</li> <li>• <i>Manufacturing Processes 3</i></li> <li>• Pewter casting</li> <li>• Finishing metals</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Properties of Textiles</i></li> <li>• CAD design</li> <li>• Printing Textiles</li> <li>• <i>Impact on Production (CAD CAM)</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Research and Investigation</i></li> <li>• Research Existing Products</li> <li>• Identifying a Client</li> <li>• Suitability for Client</li> </ul>	<ul style="list-style-type: none"> <li>• Iterative design approach</li> <li>• <i>Prototype Development</i></li> <li>• Building prototypes</li> <li>• Evaluating prototypes</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Manufacturing Processes 4</i></li> <li>• Conduct manufacturing processes</li> <li>• <i>Finishing Materials</i></li> <li>• Apply surface treatments &amp; finishes</li> </ul>
	Options Round 1					
<b>YEAR 10</b>	<b>Mock NEA - Identifying &amp; Investigating design possibilities (Section A &amp; B)</b>	<b>Mock NEA – Generating design ideas (Section C)</b>	<b>Mock NEA – Developing design ideas (Section D)</b>	<b>Mock NEA – Realising design ideas (Section E)</b>	<b>Mock NEA – Analysing and Evaluating (Section F)</b>	<b>GCSE NEA (Section A &amp; B)</b>
	<ul style="list-style-type: none"> <li>• <i>Design Strategies</i></li> <li>• <i>Briefs and Specifications</i></li> <li>• Undertaking stages of investigation</li> <li>• <i>Ecological, Environmental and Social issues</i></li> </ul>	<ul style="list-style-type: none"> <li>• Investigation - primary and secondary</li> <li>• <i>The work of others</i></li> <li>• <i>Communication of ideas 1</i></li> <li>• <i>Energy Generation and Storage</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Properties of Materials</i></li> <li>• Prototype development</li> <li>• Using CAD to develop designs</li> <li>• <i>Selection / working with materials</i></li> </ul>	<ul style="list-style-type: none"> <li>• Using and working with materials</li> <li>• <i>Manufacturing processes 1-5</i></li> <li>• <i>Surface treatments and finishes</i></li> <li>• <i>Scales of manufacture</i></li> </ul>	<ul style="list-style-type: none"> <li>• Customer review of final prototype</li> <li>• Evaluate against criteria</li> <li>• Suggest improvements</li> <li>• Planning for NEA</li> </ul>	<ul style="list-style-type: none"> <li>• Research and Investigation</li> <li>• Gathering data</li> <li>• Ergonomics and Anthropometrics</li> <li>• Briefs and Specifications</li> </ul>
	Options Round 2					

<b>YEAR 11</b>	<b>GCSE NEA (Section C &amp; D)</b>	<b>GCSE NEA (Section D) / Mock exam</b>	<b>GCSE NEA (Section E &amp; F)</b>	<b>Revision</b>	<b>Revision</b>	<b>External exams</b>
	<ul style="list-style-type: none"> <li>• The work of others</li> <li>• Communication of ideas</li> <li>• Exploring and Developing ideas</li> <li>• Prototype development</li> </ul>	<ul style="list-style-type: none"> <li>• CAD development</li> <li>• Cutting list; Engineering drawings</li> <li>• Material Investigation</li> <li>• <i>Exam Techniques</i></li> </ul>	<ul style="list-style-type: none"> <li>• Manufacturing</li> <li>• Manufacturing diary</li> <li>• Evaluation against Specification</li> <li>• Client; Testing; Improvements</li> </ul>	<ul style="list-style-type: none"> <li>• <i>Materials; Paper, Timber, Metal</i></li> <li>• <i>Processes; Paper, Timber, Metal</i></li> <li>• <i>Materials; Polymers, Textiles, Electronics</i></li> <li>• <i>Processes; Polymers, Textiles, Electronics</i></li> </ul>	<ul style="list-style-type: none"> <li>• <i>Impact on Industry</i></li> <li>• <i>Impact on Production</i></li> <li>• <i>Impact on Society and Environment</i></li> <li>• <i>Ecological, Environmental and Social Issues</i></li> </ul>	

**St Bede's Curriculum Design Principles**

Within subjects: depth, relevance, sequencing, spacing

Between subjects: breadth, cultural capital, coherence, progression, interlinking