

## DT Subject Overview

Year/Term	Term 1	Term 2	Term 3
Year 7 - (18 week carousel)	<p><b>Knowledge</b></p> <ul style="list-style-type: none"><li>• Understand the properties of materials</li><li>• Identify elements of electrical and electronic systems</li><li>• Describe the function of basic electronic circuits</li><li>• Create a functioning electronic circuit</li><li>• Programmable components*</li></ul> <p><b>Designing</b></p> <ul style="list-style-type: none"><li>• Explore user needs to inform designs</li><li>• Develop specifications</li><li>• Generate creative designs</li><li>• Communicate ideas through sketching</li><li>• Communicate ideas through modelling</li><li>• Communicate ideas through CAD</li></ul> <p><b>Making</b></p> <ul style="list-style-type: none"><li>• Use CAD precisely</li><li>• Select suitable materials to make products</li><li>• Use a wide range of materials to make products</li></ul> <p><b>Evaluation</b></p>		
Year 8 - (18 week carousel)	<p><b>Knowledge</b></p> <ul style="list-style-type: none"><li>• Know about forces and loads on structures</li><li>• Create a functioning structure</li><li>• Identify different types of motion and mechanical system</li><li>• Describe how mechanical systems can transfer motion and forces</li></ul> <p><b>Designing</b></p> <ul style="list-style-type: none"><li>• Explore user needs to inform designs</li></ul>		

	<ul style="list-style-type: none"> <li>• Develop specifications</li> <li>• Generate creative designs</li> <li>• Communicate ideas through sketching</li> <li>• Communicate ideas through detailed plans</li> <li>• Communicate ideas through modelling</li> </ul> <p><i>Making</i></p> <ul style="list-style-type: none"> <li>• Select specialist tools and processes</li> <li>• Use specialist tools and processes precisely</li> <li>• Select suitable materials to make products</li> <li>• Use a wide range of materials to make products</li> </ul> <p><i>Evaluation</i></p>
Year 9 - (18 week carousel)	<p><i>Knowledge</i></p> <ul style="list-style-type: none"> <li>• Know about Thermo Plastics and Thermo Set plastics.</li> <li>• Identify the different uses of plastics commercially and domestically.</li> <li>• Identify how plastics are formed.</li> <li>• Describe how mechanical systems can transfer motion and forces</li> </ul> <p><i>Designing</i></p> <ul style="list-style-type: none"> <li>• Explore user needs to inform designs</li> <li>• Develop specifications</li> <li>• Generate creative designs</li> <li>• Communicate ideas through sketching</li> <li>• Communicate ideas through detailed plans</li> <li>• Communicate ideas through modelling</li> </ul> <p><i>Making</i></p> <ul style="list-style-type: none"> <li>• Select specialist tools and processes</li> <li>• Use specialist tools and processes precisely</li> <li>• Select suitable materials to make products</li> </ul>

	<ul style="list-style-type: none"> <li>Use a wide range of materials to make products</li> </ul>		
	Evaluation		
<b>Educas GCSE Design and Technology</b>			
Year 10	Design and technology and our world.  SMART Materials	Electronic systems and programmable components.  Mechanical components and devices.	Materials  Natural and manufactured timber.
Year 11	Design and Making Principles	Designing and Making Principles	Revision of term 1-3 year 10

Technical principles

Core knowledge & understanding	Plus at least one from	In-depth knowledge & understanding
• Design and technology and our world		a. Electronic systems, programmable components & mechanical devices
• Smart materials		b. Papers & boards
• Electronic systems and programmable components		c. Natural & manufactured timber
• Mechanical components and devices		d. Ferrous & non-ferrous metals
• Materials		e. Thermosetting & thermoforming plastics f. Fibres & textiles

Designing and making principles

Core knowledge & understanding	Plus	In-depth knowledge & understanding (in relation to at least one of a to f above)
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