

# KS3 CURRICULUM: Design and Technology (YEAR 7&8)

<p><b>Overview</b> In Technology you will learn about:</p> <ul style="list-style-type: none"> <li>• use research and exploration, such as the study of different cultures, to identify and understand user needs and the <b>iterative design process</b></li> <li>• develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations</li> <li>• develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and CAD (computer aided design) tools</li> <li>• Make select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture</li> <li>• select from and use a wider, more complex range of materials, components and ingredients, taking into account their properties</li> <li>• test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other stakeholders</li> </ul>
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	Focus / Topic	Knowledge & Skills	Assessment
Computing	<p><b>Theme:</b> Explore various aspects of Computer Science.</p> <ul style="list-style-type: none"> <li>• Digital Literacy</li> <li>• Understanding Computers</li> <li>• Spreadsheet Modelling.</li> <li>• HTML and Website development</li> </ul>	<ul style="list-style-type: none"> <li>• Practical introduction to accessing Google Classroom and Google Docs.</li> <li>• Computer architecture, processing &amp; storage. Binary and denary mathematics.</li> <li>• Practical development of a financial model, using Google Sheets.</li> <li>• Learn the basics of HTML and CSS to develop a website. Includes interaction with a web form and a simulated database.</li> </ul>	<p><b>Year 7 &amp; 8:</b></p> <ul style="list-style-type: none"> <li>• <b>Assessment week (w/b 11th November 2019)</b></li> <li>• <b>End of Year exams (w/b 22nd June 2020 for 2 weeks)</b></li> </ul> <p><b>Year 7:</b></p> <ul style="list-style-type: none"> <li>• <b>Assessment week (w/b 14th March 2020)</b></li> </ul>
Electronic Engineering	<p><b>Design Brief:</b> To design and make a nightlight for a chosen stakeholder.</p>	<ul style="list-style-type: none"> <li>• <b>Iterative design process</b></li> <li>• Practical Skills building (metal)</li> <li>• Practical Skills building (building a circuit board)</li> <li>• Practical skills building (polymers)</li> <li>• CAD (2D Design)</li> </ul>	<ul style="list-style-type: none"> <li>• Research</li> <li>• Specification</li> <li>• Design ideas</li> <li>• Evaluation</li> <li>• Maths in technology quiz (Google Classroom)</li> </ul> <p><b>Year 7 &amp; 8:</b></p> <ul style="list-style-type: none"> <li>• <b>Assessment week (w/b 11th November 2019)</b></li> <li>• <b>End of Year exams (w/b 22nd June 2020 for 2 weeks)</b></li> </ul> <p><b>Year 7:</b></p> <ul style="list-style-type: none"> <li>• <b>Assessment week (w/b 14th March 2020)</b></li> </ul>
Food Preparation and Nutrition	<p><b>Theme:</b> Principles of nutrition and healthy eating.</p>	<ul style="list-style-type: none"> <li>• <b>Iterative design process</b></li> <li>• Food Preparation Skills</li> <li>• Food Nutrition and Health</li> <li>• Food Science</li> <li>• Food Safety</li> <li>• Food Choice</li> <li>• Food Provenance</li> </ul>	<ul style="list-style-type: none"> <li>• Self-assessment booklet</li> <li>• Maths in technology quiz (Google Classroom)</li> </ul> <p><b>Year 7 &amp; 8:</b></p> <ul style="list-style-type: none"> <li>• <b>Assessment week (w/b 11th November 2019)</b></li> <li>• <b>End of Year exams (w/b 22nd June 2020 for 2 weeks)</b></li> </ul> <p><b>Year 7:</b></p> <ul style="list-style-type: none"> <li>• <b>Assessment week (w/b 14th March 2020)</b></li> </ul>

Graphics	<b>Design Brief:</b> to design and make a set of celebration badges based around a cultural celebration.	<ul style="list-style-type: none"> <li>• <b>Iterative design process</b></li> <li>• Technical drawing</li> <li>• Design analysis</li> <li>• Use of industrial processes</li> <li>• Badge making</li> <li>• Publisher</li> <li>• Colour theory</li> <li>• New and emerging technology</li> </ul>	<ul style="list-style-type: none"> <li>• Shop front analysis</li> <li>• Research</li> <li>• Specification</li> <li>• Logo design</li> <li>• Evaluation</li> <li>• Maths in technology quiz (Google Classroom)</li> </ul> <p><b>Year 7 &amp; 8:</b></p> <ul style="list-style-type: none"> <li>• <b>Assessment week (w/b 11th November 2019)</b></li> <li>• <b>End of Year exams (w/b 22nd June 2020 for 2 weeks)</b></li> </ul> <p><b>Year 7:</b></p> <ul style="list-style-type: none"> <li>• <b>Assessment week (w/b 14th March 2020)</b></li> </ul>
Resistant Materials	<b>Design Brief:</b> To design and make a desk tidy for a chosen stakeholder.	<ul style="list-style-type: none"> <li>• <b>Iterative design process</b></li> <li>• Practical Skills building (polymers)</li> <li>• Design work</li> <li>• Quality controls</li> </ul>	<ul style="list-style-type: none"> <li>• Research</li> <li>• Specification</li> <li>• Design ideas</li> <li>• Evaluation</li> <li>• Maths in technology quiz (Google Classroom)</li> </ul> <p><b>Year 7 &amp; 8:</b></p> <ul style="list-style-type: none"> <li>• <b>Assessment week (w/b 11th November 2019)</b></li> <li>• <b>End of Year exams (w/b 22nd June 2020 for 2 weeks)</b></li> </ul> <p><b>Year 7:</b></p> <ul style="list-style-type: none"> <li>• <b>Assessment week (w/b 14th March 2020)</b></li> </ul>
Textiles	<b>Design Brief:</b> Design and make an alternative to a disposable supermarket bag.	<ul style="list-style-type: none"> <li>• <b>Iterative design process</b></li> <li>• Health &amp; Safety in the textile industry</li> <li>• Fibre Classification. Natural and manufactured fibres</li> <li>• Fabric properties</li> <li>• Sustainability</li> <li>• New and emerging technology</li> <li>• Scales of production</li> </ul>	<ul style="list-style-type: none"> <li>• Research</li> <li>• Specification</li> <li>• Logo design</li> <li>• Evaluation</li> <li>• Maths in technology quiz (Google Classroom)</li> </ul> <p><b>Year 7 &amp; 8:</b></p> <ul style="list-style-type: none"> <li>• <b>Assessment week (w/b 11th November 2019)</b></li> <li>• <b>End of Year exams (w/b 22nd June 2020 for 2 weeks)</b></li> </ul> <p><b>Year 7:</b></p> <ul style="list-style-type: none"> <li>• <b>Assessment week (w/b 14th March 2020)</b></li> </ul>

#### Further Information

At the end of year 8 students opt for two materials areas to study in greater depth in year 9. The year group is split into four bands by the school (E, F, G and H). These are subdivided into six mixed ability Technology sets and are timetabled for two double fifty minute periods per week. The subjects in the rota are Computing, Electronic Engineering, Food Preparation and Nutrition, Graphics, Resistant Materials and Textiles Technology. Each unit is a term and a half in length.