



## CHS Curriculum Intent

**SUCCESSFUL:** Learners who gain deep and powerful knowledge in preparation for life; combining academic rigour, curiosity and creative flair.

**CREATIVE:** Learners who are imaginative, optimistic and inventive; finding their voice to become effective communicators prepared for lifelong adaptability

**HAPPY:** Learners who are confident, resilient, well-rounded citizens; they understand the world's communities and are ready to discover their place in it.

## CHS Curriculum Area Framework for Learning – Year 9

<b>SUBJECT</b>	<b>Design Technology</b>
<b>INTENT</b>	<p>Design and Technology exposes students to a wide range of areas relating to not only how products are designed and made, but also gives and insight into the justification for using and avoiding materials, considerations for Sustainability and explore how historical developments have led to more advances manufacturing processes, as a result, GCSE Design and Technology will prepare students to participate confidently and successfully in an increasingly technological world.</p> <p>Students will gain awareness and learn from wider influences on Design and Technology including historical, social, cultural, environmental and economic factors, as well as be able to practice and develop some practical skills not only in designing but when working with a range of materials. It is our hope this developed student's creativity as well as problem solving skills when designing and making and apply technical and practical expertise.</p>

**Department:** **Computing and Technology 2020-2021**

**Subject:** AQA Design Technology (8552)

<b>Year Group</b>	<b>9</b>					
<b>Rationale/ Narrative</b>	<p>The work completed in Year 9 provides a foundation layer of basic design thinking skills and knowledge of the six main materials that the students can work with as well as allowing them to build up a bank of practical skills through the use of these materials as they complete a series of projects.</p> <p>All lesson, with the exception of practical lessons will be suitable to complete at home via distance learning.</p>					
	<b>Autumn 1</b>	<b>Autumn 2</b>	<b>Spring 1</b>	<b>Spring 2</b>	<b>Summer 1</b>	<b>Summer 2</b>



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	(7½ weeks)	(7 weeks)	(6 weeks)	(5 weeks)	(5 weeks)	(7 weeks)
<b>KNOWLEDGE</b>	<p>Students will focus their learning on core designing principles:</p> <ul style="list-style-type: none"> <li>Using Designers, companies and products as a bases for all specialist drawing skills.</li> <li>Design principles that will enable them to develop skills in technical drawing as well as those that will produce creative and innovative designs (Isometric, perspective, orthographic ect).</li> <li>Design strategies that will assist them in generating initial ideas and avoid design fixation.</li> </ul> <p>Develop a design brief and specification.</p> <ul style="list-style-type: none"> <li>How to develop, communicate, record and justify design ideas, applying suitable techniques.</li> <li>Mathematical modelling; CAD modelling and physical modelling. <ul style="list-style-type: none"> <li>material properties vocabulary explained in preparation for following terms.</li> </ul> </li> </ul>	<p>Students will focus their learning on paper and boards:</p> <ul style="list-style-type: none"> <li>Their sources, origins, physical and working properties.</li> <li>The impact of forces and stresses on all material areas.</li> <li>Their ecological and social footprint (Deforestation, 6 R's).</li> <li>The way in which the selection of paper or board for a product will be influenced by a range of factors.</li> <li>The stock forms, types and sizes that paper and boards are available in use mathematical questioning here as in GCSE papers.</li> <li>The names of tools and equipment used particularly when working with paper</li> </ul>	<p>Students will focus their learning on natural and manufactured Boards:</p> <ul style="list-style-type: none"> <li>Their sources, origins, physical and working properties.</li> <li>Their ecological and social footprint. ( Bamboo)</li> <li>The way in which the selection of timber for a product will be influenced by a range of factors (Deforestation/ Farming).</li> <li>The stock forms, types and sizes that timber is available, use mathematical questions for this section.</li> <li>The names of tools and equipment used particularly when working with woods and timbers. <ul style="list-style-type: none"> <li>Quality control in commercial timbre manufacturing.</li> </ul> </li> </ul>	<p>Students will focus their learning on natural, synthetic, blended and mixed fibers; woven, non-woven and knitted textiles:</p> <ul style="list-style-type: none"> <li>Their sources, origins, physical and working properties.</li> <li>Their ecological and social footprint. (Fairtrade/ Organic / Dyes)</li> <li>The way in which the selection of fabric for a product will be influenced by a range of factors.</li> <li>The stock forms, types and sizes that textiles are available in.</li> <li>The names of tools and equipment used particularly when working with textiles. <ul style="list-style-type: none"> <li>Change sin fashion and trends in relations to new and emergent technologies.</li> </ul> </li> </ul>	<p>Students will focus their learning on ferrous and non-ferrous metals:</p> <ul style="list-style-type: none"> <li>Their sources, origins, physical and working properties.</li> <li>Their ecological and social footprint ( Mining).</li> <li>The way in which the selection of metal for a product will be influenced by a range of factors.</li> <li>The stock forms, types and sizes that metals are available in.</li> <li>The names of tools and equipment used particularly when working with metal. Quality control measure used in industry.</li> </ul>	<p>Students will focus their learning on thermoforming and thermosetting polymers.</p> <ul style="list-style-type: none"> <li>Their sources, origins, physical and working properties.</li> <li>Their ecological and social footprint.</li> <li>The way in which the selection of plastic for a product will be influenced by a range of factors.</li> <li>The stock forms, types and sizes that plastics are available in.</li> <li>The names of tools and equipment used particularly when working with plastics. <ul style="list-style-type: none"> <li>The impact of resource consumption on the planet.</li> </ul> </li> </ul>



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		and boards. <ul style="list-style-type: none"> <li>Quality control measures.</li> </ul>			Case studies on Apple and Alessi.	
<b>SKILLS</b>	<p>Students will be able to:</p> <ul style="list-style-type: none"> <li>Identify, select and breakdown key information. <ul style="list-style-type: none"> <li>Formulate design briefs &amp; Specification</li> </ul> </li> <li>Undertake investigative tasks.</li> <li>Develop specialist practical drawing skills. <ul style="list-style-type: none"> <li>Modelling</li> <li>Research skills</li> </ul> </li> </ul>	<p>Students will be able to:</p> <ul style="list-style-type: none"> <li>Identify, select and breakdown key information.</li> <li>Undertake investigative tasks.</li> <li>Develop practical construction skills using paper and board. (methods of: cutting and shaping, joining, finishing techniques and applied finishes).</li> <li>Development of mathematical reasoning</li> <li>Correct use of key terminology</li> <li>Analysis of existing products</li> </ul>	<p>Students will be able to:</p> <ul style="list-style-type: none"> <li>Identify, select and breakdown key information.</li> <li>Undertake investigative tasks.</li> <li>Develop practical construction skills using woods and timbers. (methods of: cutting and shaping, joining, finishing techniques and applied finishes).</li> <li>Development of mathematical reasoning</li> <li>Correct use of key terminology</li> </ul> <p>Analysis of existing products</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> <li>Identify, select and breakdown key information.</li> <li>Undertake investigative tasks.</li> <li>Develop practical construction skills using textiles. (methods of: cutting and shaping, joining. The traditional methods of applied finishing both for decorative purposes and enhancement of physical qualities).</li> <li>Development of mathematical reasoning</li> <li>Correct use of key terminology</li> </ul> <p>Analysis of existing products</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> <li>Identify, select and breakdown key information.</li> <li>Undertake investigative tasks.</li> <li>Develop practical construction skills using metals. (methods of: cutting and shaping, joining, finishing techniques and applied finishes).</li> <li>Development of mathematical reasoning</li> <li>Correct use of key terminology</li> </ul> <p>Analysis of existing products</p>	<p>Students will be able to:</p> <ul style="list-style-type: none"> <li>Identify, select and breakdown key information.</li> <li>Undertake investigative tasks.</li> <li>Develop practical construction skills using plastics. (methods of: cutting and shaping, joining, finishing techniques and applied finishes).</li> <li>Development of mathematical reasoning</li> <li>Correct use of key terminology</li> </ul> <p>Analysis of existing products</p>
<b>ASSESSMENTS</b>	<ul style="list-style-type: none"> <li><b>Classwork piece</b> – Architecture model and design work.</li> <li><b>Classwork piece</b> – Design brief and specification</li> <li><b>Home Learning piece</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Progress Test</b></li> <li><b>Classwork piece</b> Students will produce a piece of work on material types and their properties specific to</li> </ul>	<ul style="list-style-type: none"> <li><b>Classwork piece</b> – Students will produce a piece of work on material types and their properties specific to topic. <i>(Investigation and exam question practice)</i></li> </ul>	<ul style="list-style-type: none"> <li><b>Progress Test</b></li> <li><b>Classwork piece</b> – Students will produce a piece of work on material types and their properties specific to topic.</li> </ul>	<ul style="list-style-type: none"> <li>Classwork piece Students will create an extended written piece on social and ecological effects of material area.</li> <li><b>Classwork piece</b></li> </ul>	<ul style="list-style-type: none"> <li><b>Progress Test</b></li> <li><b>Classwork piece</b> Students will produce a piece of work on material types and their properties specific to topic.</li> </ul>



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	Students to complete task 3 as outlined below.	<p>topic. (Investigation and exam question practice)</p> <ul style="list-style-type: none"> <li>• <b>Home Learning piece</b> Students to complete task 1 as outlined below.</li> </ul>	<ul style="list-style-type: none"> <li>• <b>Classwork piece</b> – Students will complete a product analysis.</li> <li>• <b>Home Learning piece</b> Students will complete task 2 as outlined below</li> </ul>	<p>(Investigation and exam question practice)</p> <ul style="list-style-type: none"> <li>• <b>Classwork piece</b> – Students will complete a practical and evaluation on material area.</li> <li>• <b>Home Learning piece</b> Students will complete task 3 as outlined below.</li> </ul>	<p>Students will produce a piece of work on material types and their properties specific to topic. (Investigation and exam question practice)</p> <ul style="list-style-type: none"> <li>• <b>Home Learning piece</b> Students will complete task 1 as outlined below.</li> </ul>	<p>(Investigation and exam question practice)</p> <ul style="list-style-type: none"> <li>• <b>Home Learning piece</b> Students will complete task 3 as outlined below.</li> </ul>
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