

Design and Technology Year 7  
 SUBJECT OVERVIEW MAP 2020-2021

Year 7	Substantive Knowledge	Disciplinary Knowledge	Assessment
<p><b>Half-term 1</b> Lesson 1-12</p>	<p>Workshop health and safety regulations and procedures</p> <p>Analysing a task</p> <p>Effective design strategy</p> <p>Reasons for analysing the work/ designs of others</p> <p>Design development strategy</p> <p>Using workshop equipment to produce function and aesthetic designs</p> <p>Finishing methods for varied types of materials</p> <p>Collaborative design</p>	<ul style="list-style-type: none"> <li>✓ Know apply and understanding of materials, skills and processes</li> <li>✓ Health and safety procedures and regulations</li> <li>✓ Select from and use specialist tools, techniques, processes, equipment and machinery precisely.</li> <li>✓ Identify and solve their own design problems and understand how to reformulate problems given to them.</li> <li>✓ Test, evaluate and refine ideas and products.</li> <li>✓ Analyse the work of past and present professionals and others to broaden their understanding.</li> <li>✓ Use research and exploration, such as the study of different cultures, to identify and understand user needs.</li> <li>✓ Identify user needs</li> <li>✓ Take-into-account user views</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Assessment Test 1: Memphis and design (/10)</li> <li><input type="checkbox"/> Cardboard model (/10) group task</li> <li><input type="checkbox"/> Vacuum formed base (/10)</li> <li><input type="checkbox"/> Homework</li> </ul>

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<p><b>Half-term 2</b></p> <p>Lessons 13 - 24</p>	<p>CAD software and how it can improve and aid further designing</p> <p>Electricity and electron flow within a circuit</p> <p>Electrical components and their outputs</p> <p>Circuits – joining for conductivity</p> <p>Evaluation and testing of products and the design journey</p>	<ul style="list-style-type: none"> <li>✓ Use a variety of approaches to generate creative ideas and avoid stereo typical responses.</li> <li>✓ Develop and communicate design ideas using annotated sketches, modelling and oral presentations.</li> <li>✓ Understand and use the properties of materials and the performance of structural elements to achieve (functioning) in this case, modelled solutions.</li> <li>✓ 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 taking-into-account their properties.</li> <li>✓ Understand how more advanced electrical and electronic systems can be powered and used in their products.</li> <li>✓ Understand developments in design and technology, its impact on individuals, society and the</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Electronic circuit (/10)</li> <li><input type="checkbox"/> Reflector (/10)</li> <li><input type="checkbox"/> Assessment 2: Memphis and design theory with electronics (/10)</li> <li><input type="checkbox"/> Assessment 3: Completed Memphis nightlight (/20)</li> </ul>
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		<p>environment and the responsibilities of designers, engineers and technologists.</p> <ul style="list-style-type: none"> <li>✓ Understand and use the properties of materials</li> <li>✓ Identify and solve their own design problems and understand how to reformulate problems given to them.</li> </ul>	
<p><b>Half-term 3</b>          Lessons 25-36</p>	<p>Timber sources and origins</p> <p>Accurate measuring and marking out procedures</p> <p>Accurate and safe cutting hand tool use</p> <p>Joints in timber</p> <p>Product assembly/ construction</p> <p>Quality finishing techniques</p> <p>Design development and enhancement</p> <p>CAD and CAM</p>	<ul style="list-style-type: none"> <li>✓ Understand and use the properties of materials and the performance of structural elements to achieve functioning solutions.</li> <li>✓ Select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer aided manufacture.</li> <li>✓ Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world inc mathematical modelling</li> <li>✓ Select from and use a wider, more complex range of materials,</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Assessment 4: Storage tray (not included in combined score unless necessary)</li> </ul>

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		components taking-into-account, their properties.	
<b>Half-term 4</b> Lesson 1-12	Workshop health and safety regulations and procedures Analysing a task Effective design strategy Reasons for analysing the work/ designs of others Design development strategy Using workshop equipment to produce function and aesthetic designs Finishing methods for varied types of materials Collaborative design	<ul style="list-style-type: none"> <li>✓ Know apply and understanding of materials, skills and processes</li> <li>✓ Health and safety procedures and regulations</li> <li>✓ Select from and use specialist tools, techniques, processes, equipment and machinery precisely.</li> <li>✓ Identify and solve their own design problems and understand how to reformulate problems given to them.</li> <li>✓ Test, evaluate and refine ideas and products.</li> <li>✓ Analyse the work of past and present professionals and others to broaden their understanding.</li> <li>✓ Use research and exploration, such as the study of different cultures, to identify and understand user needs.</li> <li>✓ Identify user needs</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Assessment Test 1: Memphis and design (/10)</li> <li><input type="checkbox"/> Cardboard model (/10) group task</li> <li><input type="checkbox"/> Vacuum formed base (/10)</li> <li><input type="checkbox"/> Homework</li> </ul>

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		<ul style="list-style-type: none"> <li>✓ Take-into-account user views</li> </ul>	
<p><b>Half-term 5</b>          Lessons 13 - 24</p>	<p>CAD software and how it can improve and aid further designing</p> <p>Electricity and electron flow within a circuit</p> <p>Electrical components and their outputs</p> <p>Circuits – joining for conductivity</p> <p>Evaluation and testing of products and the design journey</p>	<ul style="list-style-type: none"> <li>✓ Use a variety of approaches to generate creative ideas and avoid stereo typical responses.</li> <li>✓ Develop and communicate design ideas using annotated sketches, modelling and oral presentations.</li> <li>✓ Understand and use the properties of materials and the performance of structural elements to achieve (functioning) in this case, modelled solutions.</li> <li>✓ 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 taking-into-account their properties.</li> <li>✓ Understand how more advanced electrical and electronic systems can</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Electronic circuit (/10)</li> <li><input type="checkbox"/> Reflector (/10)</li> <li><input type="checkbox"/> Assessment 2: Memphis and design theory with electronics (/10)</li> <li><input type="checkbox"/> Assessment 3: Completed Memphis nightlight (/20)</li> </ul>

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		<p>be powered and used in their products.</p> <ul style="list-style-type: none"> <li>✓ Understand developments in design and technology, its impact on individuals, society and the environment and the responsibilities of designers, engineers and technologists.</li> <li>✓ Understand and use the properties of materials</li> <li>✓ Identify and solve their own design problems and understand how to reformulate problems given to them.</li> </ul>	
<p><b>Half-term 6</b>          Lessons 25-36</p>	<p>Timber sources and origins</p> <p>Accurate measuring and marking out procedures</p> <p>Accurate and safe cutting hand tool use</p> <p>Joints in timber</p> <p>Product assembly/ construction</p> <p>Quality finishing techniques</p> <p>Design development and enhancement</p> <p>CAD and CAM</p>	<ul style="list-style-type: none"> <li>✓ Understand and use the properties of materials and the performance of structural elements to achieve functioning solutions.</li> <li>✓ Select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer aided manufacture.</li> <li>✓ Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an</li> </ul>	<p><input type="checkbox"/> Assessment 4: Storage tray (not included in combined score unless necessary)</p>

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		<p>increasingly technological world inc mathematical modelling</p> <ul style="list-style-type: none"><li>✓ Select from and use a wider, more complex range of materials, components taking-into-account, their properties.</li><li>✓</li></ul>	
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Design and Technology – Year 8  
 SUBJECT OVERVIEW MAP 2021-2022

Year 8	Substantive Knowledge	Disciplinary Knowledge	Assessment
<b>Half-term 1</b>  (Lessons 1-12)	<b>Students will have knowledge of:</b> <ul style="list-style-type: none"> <li>• Workshop health and safety procedures and regulations</li> <li>• What Design and Technology 'is'</li> <li>• Product analysis</li> <li>• Target market (primary, secondary, tertiary) and client profile</li> <li>• Design brief</li> <li>• Salvador Dali</li> <li>• Initial design strategies</li> <li>• Developed design and design evaluation</li> <li>• Measuring and marking out</li> </ul>	<ul style="list-style-type: none"> <li>✓ Health and safety conduct charter using 'always' rules – inclusive of interactive workshop tour</li> <li>✓ Analysis of a chosen product in relation to the wider context of 'design and technology'</li> <li>✓ Completion of a client profile through questioning</li> <li>✓ Generation of a range of specification points that link to the client profile</li> <li>✓ Research and analysis of Salvador Dali and his time theory of 'melting cheese'</li> <li>✓ 4 x 4 designing and adaptation from another designer's perspective</li> <li>✓ Developing a design solution by selecting from work already produced</li> <li>✓ Marking out a given template using tri-square, steel rule and pencil</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Assessment 1: Design theory and Dali (/6)</li> <li><input type="checkbox"/> Assessment 2: Tools and marking out (/15)</li> <li><input type="checkbox"/> Homework</li> </ul>
<b>Half-term 2</b>  (Lessons 13-24)	<b>Students will have knowledge of:</b> <ul style="list-style-type: none"> <li>• Cutting using manual hand tools in the workshop</li> <li>• Smoothing using the machine sanding disk and glass paper</li> <li>• Using workshop machinery safely and accurately – pillar drill, sanding disk, line bender</li> </ul>	<ul style="list-style-type: none"> <li>✓ Use a bench hook, vice, tenon saw, and coping saw safely – explain basic parts and how to use them effectively</li> <li>✓ Demonstrate independent and safe use of the pillar drill, machine sanding disk and line bender</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Practical Assessment 1: Back box (/10)</li> <li><input type="checkbox"/> Practical Assessment 2: Front plate (/10)</li> <li><input type="checkbox"/> Assessment 3: Dali clock final prototype (/20)</li> <li><input type="checkbox"/> Homework</li> </ul>



Design and Technology – Year 8  
 SUBJECT OVERVIEW MAP 2021-2022

	<ul style="list-style-type: none"> <li>• Constructing an accurate and functional form</li> <li>• CAD and 2d design</li> <li>• Working to a templated constraint</li> <li>• Final prototype finishing</li> <li>• Plastics/ polymers theoretical understanding</li> <li>• Smart materials theoretical understanding</li> </ul>	<ul style="list-style-type: none"> <li>✓ Smooth rough areas to a high-quality surface finish using sanding boards and glass paper</li> <li>✓ Use adhesive and ‘clamping’ techniques to construct an accurate form from independently cut pieces of MDF</li> <li>✓ Explain what stretch is when referring to masking tape</li> <li>✓ Use 2d design to create image generation for a clock face that can then be cut on the laser cutter</li> <li>✓ Finish a completed product</li> <li>✓ Plastics theory:          Explain the difference between thermo and thermoset plastics          List common uses for each type of plastic          Research the working properties and benefits of using acrylic sheet for the clock project</li> <li>✓ Smart materials          Explain the difference between a smart material and a modern material          List common uses for 2 of each type of material          Research the environmental advantages and disadvantages of 2 chosen material</li> </ul>	
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Design and Technology – Year 8  
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<p><b>Half-term 3</b></p> <p>(Lessons 25-36)</p>	<p><b>Students will have knowledge of:</b></p> <ul style="list-style-type: none"> <li>• Cardboard prototyping by manual methods</li> <li>• Designing to a given brief</li> <li>• CAD and CAM (2d design and laser cutting)</li> <li>• Isometric and oblique perspective drawing</li> </ul>	<ul style="list-style-type: none"> <li>✓ Design a product to a chosen theme</li> <li>✓ Create 3 dimensional cardboard prototypes that reflect a given product – key holder</li> <li>✓ Use CAD techniques to draw a template and colour the lines to work appropriately for the laser cutter</li> <li>✓ Explain how to operate the laser cutter</li> <li>✓ Sketch cubes in isometric and oblique perspective</li> <li>✓ Sketch a building with more intricate detail in either isometric or oblique perspective</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Assessment 3: DT Knowledge and skill (/19)</li> <li><input type="checkbox"/> Practical outcome 3: Cardboard keyring holder prototype (/10)</li> <li><input type="checkbox"/> Practical outcome 4: Final key holder (/10)</li> <li><input type="checkbox"/> Homework</li> <li><input type="checkbox"/> Combined Assessment score (/100)</li> </ul>
<p><b>Half-term 4</b></p> <p>(Lessons 1-12)</p>	<p><b>Students will have knowledge of:</b></p> <ul style="list-style-type: none"> <li>• Workshop health and safety procedures and regulations</li> <li>• What Design and Technology ‘is’</li> <li>• Product analysis</li> <li>• Target market (primary, secondary, tertiary) and client profile</li> <li>• Design brief</li> <li>• Salvador Dali</li> <li>• Initial design strategies</li> <li>• Developed design and design evaluation</li> <li>• Measuring and marking out</li> </ul>	<ul style="list-style-type: none"> <li>✓ Health and safety conduct charter using ‘always’ rules – inclusive of interactive workshop tour</li> <li>✓ Analysis of a chosen product in relation to the wider context of ‘design and technology’</li> <li>✓ Completion of a client profile through questioning</li> <li>✓ Generation of a range of specification points that link to the client profile</li> <li>✓ Research and analysis of Salvador Dali and his time theory of ‘melting cheese’</li> <li>✓ 4 x 4 designing and adaptation from another designer’s perspective</li> <li>✓ Developing a design solution by selecting from work already produced</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Assessment 1: Design theory and Dali (/6)</li> <li><input type="checkbox"/> Assessment 2: Tools and marking out (/15)</li> <li><input type="checkbox"/> Homework</li> </ul>

Design and Technology – Year 8  
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		<ul style="list-style-type: none"> <li>✓ Marking out a given template using tri-square, steel rule and pencil</li> </ul>	
<p><b>Half-term 5</b>  (Lessons 13-24)</p>	<p><b>Students will have knowledge of:</b></p> <ul style="list-style-type: none"> <li>• Cutting using manual hand tools in the workshop</li> <li>• Smoothing using the machine sanding disk and glass paper</li> <li>• Using workshop machinery safely and accurately – pillar drill, sanding disk, line bender</li> <li>• Constructing an accurate and functional form</li> <li>• CAD and 2d design</li> <li>• Working to a templated constraint</li> <li>• Final prototype finishing</li> <li>• Plastics/ polymers theoretical understanding</li> <li>• Smart materials theoretical understanding</li> </ul>	<ul style="list-style-type: none"> <li>✓ Use a bench hook, vice, tenon saw, and coping saw safely – explain basic parts and how to use them effectively</li> <li>✓ Demonstrate independent and safe use of the pillar drill, machine sanding disk and line bender</li> <li>✓ Smooth rough areas to a high-quality surface finish using sanding boards and glass paper</li> <li>✓ Use adhesive and ‘clamping’ techniques to construct an accurate form from independently cut pieces of MDF</li> <li>✓ Explain what stretch is when referring to masking tape</li> <li>✓ Use 2d design to create image generation for a clock face that can then be cut on the laser cutter</li> <li>✓ Finish a completed product</li> <li>✓ Plastics theory:  Explain the difference between thermo and thermoset plastics  List common uses for each type of plastic</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Practical Assessment 1: Back box (/10)</li> <li><input type="checkbox"/> Practical Assessment 2: Front plate (/10)</li> <li><input type="checkbox"/> Assessment 3: Dali clock final prototype (/20)</li> <li><input type="checkbox"/> Homework</li> </ul>

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		<p>Research the working properties and benefits of using acrylic sheet for the clock project</p> <ul style="list-style-type: none"> <li>✓ Smart materials</li> </ul> <p>Explain the difference between a smart material and a modern material</p> <p>List common uses for 2 of each type of material</p> <p>Research the environmental advantages and disadvantages of 2 chosen material</p>	
<p><b>Half-term 6</b>  (Lessons 25-36)</p>	<p><b>Students will have knowledge of:</b></p> <ul style="list-style-type: none"> <li>• Cardboard prototyping by manual methods</li> <li>• Designing to a given brief</li> <li>• CAD and CAM (2d design and laser cutting)</li> <li>• Isometric and oblique perspective drawing</li> </ul>	<ul style="list-style-type: none"> <li>✓ Design a product to a chosen theme</li> <li>✓ Create 3 dimensional cardboard prototypes that reflect a given product – key holder</li> <li>✓ Use CAD techniques to draw a template and colour the lines to work appropriately for the laser cutter</li> <li>✓ Explain how to operate the laser cutter</li> <li>✓ Sketch cubes in isometric and oblique perspective</li> <li>✓ Sketch a building with more intricate detail in either isometric or oblique perspective</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Assessment 3: DT Knowledge and skill (/19)</li> <li><input type="checkbox"/> Practical outcome 3: Cardboard keyring holder prototype (/10)</li> <li><input type="checkbox"/> Practical outcome 4: Final key holder (/10)</li> <li><input type="checkbox"/> Homework</li> <li><input type="checkbox"/> Combined Assessment score (/100)</li> </ul>

Design and Technology – Year 9  
 SUBJECT OVERVIEW MAP 2021-2022

Year 9	Substantive Knowledge	Disciplinary Knowledge	Assessment
<p><b>Half-term 1</b>  (Lessons 1-12)</p>	<p><b>Students will have knowledge of:</b></p> <ul style="list-style-type: none"> <li>• <b>Perspective drawing:</b> Oblique, Isometric, 1-point perspective, 2-point perspective</li> <li>• <b>Smart Materials</b> Polymorph, photochromic, electro-chromic, hydro-chromic, thermo-chromic, phosphorescent</li> <li>• <b>Modern materials:</b> Aa selection from – titanium, precious metal clay, metal foams, grp, Kevlar, fibre optics, manufactured boards, nano-materials</li> <li>• <b>Composite materials</b> Aeroply, maples, carbon fibre, chipboard           <ul style="list-style-type: none"> <li>• <b>The Design Journey</b></li> </ul> </li> </ul> <p>Contextual challenge</p> <p>Design brief</p> <p>Product analysis using SEA CAFÉ – Size and safety, environment, aesthetics, customer and cost, availability, function, ergonomics</p> <ul style="list-style-type: none"> <li>• <b>Initial designing via sketch</b></li> </ul>	<ul style="list-style-type: none"> <li>✓ Produce perspective drawings increasing in difficulty from cubes to buildings/ a street scene</li> <li>✓ Create an information sheet/ revision aid</li> <li>✓ Design products with given specification points such as materials</li> <li>✓ Define contextual challenge and use this to develop a design brief suitable to the project</li> <li>✓ Choose an appropriate client and generate design ideas based on specified points from the client</li> <li>✓ Analyse products using specified criteria for example SEA CAFÉ – use this analysis later in the project to evaluate</li> <li>✓ Generate initial designs based on inspired designer research - sketched</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Assessment 1: Perspective knowledge (/15)</li> <li><input type="checkbox"/> Homework</li> </ul>

Design and Technology – Year 9  
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<p><b>Half-term 2</b>           (Lessons 13 – 24)</p>	<p><b>Students will have knowledge of:</b></p> <ul style="list-style-type: none"> <li>• <b>Developing a design</b></li> <li>• <b>CAD and CAM</b></li> <li>• <b>Designers:</b> Charles Rennie Macintosh and Ettore Sottsass</li> <li>• <b>Cardboard prototyping skills</b></li> <li>• <b>Modelling in harder materials skills</b></li> </ul>	<ul style="list-style-type: none"> <li>✓ Develop a design solution that shows clear links initial designs and to inspirational designer research – sketched</li> <li>✓ Continue to develop designs by using CAD to break down possible sections</li> <li>✓ Produce 3d models in card using hot glue, masking tape, craft knives and split pins safely</li> <li>✓ Produce a 3d model using available harder materials within the workshop</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Assessment 2: Materials and design theory (/25)</li> <li><input type="checkbox"/> Practical Assessment: Card model (/10)</li> <li><input type="checkbox"/> Practical Assessment: Card model 2 (/10)</li> <li><input type="checkbox"/> Practical Assessment: Harder materials mode (/10)</li> <li><input type="checkbox"/> Homework</li> </ul>
<p><b>Half-term 3</b>           (Lessons 25-36)</p>	<p><b>Students will have knowledge of:</b></p> <ul style="list-style-type: none"> <li>• <b>Final prototyping skills</b> – working with softwood, using workshop machinery safely, using hand tools to cut and finish traditional joints, smoothing, constructing</li> <li>• <b>Specification and redesign</b></li> <li>• <b>Evaluating and testing</b></li> </ul>	<ul style="list-style-type: none"> <li>✓ Produce a final prototype using workshop equipment</li> <li>✓ Create joints in softwood using traditional manual hand tools – comb, housing, corner-lap</li> <li>✓ Construct a 3d final prototype either to a given template or based on own designs.</li> <li>✓ Generate a client based specification that encompasses all parts of the design journey so far</li> <li>✓ Evaluate using a specification and test against set criteria</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Assessment 3: Encouraging nature (/20)</li> <li><input type="checkbox"/> Practical Assessment: Final prototype (/10)</li> <li><input type="checkbox"/> Combined final assessment score: /100</li> <li><input type="checkbox"/> Homework</li> </ul>

Design and Technology – Year 9  
 SUBJECT OVERVIEW MAP 2021-2022

<p><b>Half-term 4</b>  (Lessons 1-12)</p>	<p><b>Students will have knowledge of:</b></p> <ul style="list-style-type: none"> <li>• <b>Perspective drawing:</b> Oblique, Isometric, 1-point perspective, 2-point perspective</li> <li>• <b>Smart Materials</b> Polymorph, photochromic, electro-chromic, hydro-chromic, thermo-chromic, phosphorescent</li> <li>• <b>Modern materials:</b> Aa selection from – titanium, precious metal clay, metal foams, grp, Kevlar, fibre optics, manufactured boards, nano-materials</li> <li>• <b>Composite materials</b> Aeroply, maples, carbon fibre, chipboard           <ul style="list-style-type: none"> <li>• <b>The Design Journey</b></li> </ul> </li> </ul> <p>Contextual challenge          Design brief          Product analysis using SEA CAFÉ – Size and safety, environment, aesthetics, customer and cost, availability, function, ergonomics</p> <ul style="list-style-type: none"> <li>• <b>Initial designing via sketch</b></li> </ul>	<ul style="list-style-type: none"> <li>✓ Produce perspective drawings increasing in difficulty from cubes to buildings/ a street scene</li> <li>✓ Create an information sheet/ revision aid</li> <li>✓ Design products with given specification points such as materials</li> <li>✓ Define contextual challenge and use this to develop a design brief suitable to the project</li> <li>✓ Choose an appropriate client and generate design ideas based on specified points from the client</li> <li>✓ Analyse products using specified criteria for example SEA CAFÉ – use this analysis later in the project to evaluate</li> <li>✓ Generate initial designs based on inspired designer research - sketched</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Assessment 1: Perspective knowledge (/15)</li> <li><input type="checkbox"/> Homework</li> </ul>
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Design and Technology – Year 9  
 SUBJECT OVERVIEW MAP 2021-2022

<p><b>Half-term 5</b>  (Lessons 13-24)</p>	<p><b>Students will have knowledge of:</b></p> <ul style="list-style-type: none"> <li>• <b>Developing a design</b></li> <li>• <b>CAD and CAM</b></li> <li>• <b>Designers:</b> Charles Rennie Macintosh and Ettore Sottsass</li> <li>• <b>Cardboard prototyping skills</b></li> <li>• <b>Modelling in harder materials skills</b></li> </ul>	<ul style="list-style-type: none"> <li>✓ Develop a design solution that shows clear links initial designs and to inspirational designer research – sketched</li> <li>✓ Continue to develop designs by using CAD to break down possible sections</li> <li>✓ Produce 3d models in card using hot glue, masking tape, craft knives and split pins safely</li> <li>✓ Produce a 3d model using available harder materials within the workshop</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Assessment 2: Materials and design theory (/25)</li> <li><input type="checkbox"/> Practical Assessment: Card model (/10)</li> <li><input type="checkbox"/> Practical Assessment: Card model 2 (/10)</li> <li><input type="checkbox"/> Practical Assessment: Harder materials mode (/10)</li> <li><input type="checkbox"/> Homework</li> </ul>
<p><b>Half-term 6</b>  (Lessons 25-36)</p>	<p><b>Students will have knowledge of:</b></p> <ul style="list-style-type: none"> <li>• <b>Final prototyping skills</b> – working with softwood, using workshop machinery safely, using hand tools to cut and finish traditional joints, smoothing, constructing</li> <li>• <b>Specification and redesign</b></li> <li>• <b>Evaluating and testing</b></li> </ul>	<ul style="list-style-type: none"> <li>✓ Produce a final prototype using workshop equipment</li> <li>✓ Create joints in softwood using traditional manual hand tools – comb, housing, corner-lap</li> <li>✓ Construct a 3d final prototype either to a given template or based on own designs.</li> <li>✓ Generate a client based specification that encompasses all parts of the design journey so far</li> <li>✓ Evaluate using a specification and test against set criteria</li> </ul>	<ul style="list-style-type: none"> <li><input type="checkbox"/> Assessment 3: Encouraging nature (/20)</li> <li><input type="checkbox"/> Practical Assessment: Final prototype (/10)</li> <li><input type="checkbox"/> Combined final assessment score: /100</li> <li><input type="checkbox"/> Homework</li> </ul>