

Y10 Design & Technology								
(A)UTHENTIC	(S)ACRED	(P)ASSIONATE	(I)NSPIRATIONAL	(R)ESILIENT	(E)MPATHETIC			
Advent 1 Toolbox Project	Advent 2 Toolbox Project	Review of learning DIRT & summative 3 assessment points: 1) Materials test 2) Industrial processes 3) Geometry and measures 4) Final Practical Outcome	Lent 1 Mock NEA	Lent 2 Mock NEA	Review of learning DIRT & summative 3 assessment points: 1) Generating ideas 2) Developing ideas	Pentecost 1 Testing	Pentecost 2 NEA live	Review of learning DIRT & summative Summative assessment of Section A
<p>Unit intent:</p> <p>For their first GCSE projects, students will learn how to manufacture the Joiners Toolbox. This introduce a range of complex joints to students.</p> <p>This project aims to introduce:</p> <p>Manufacturing a range of joints using correct production aids, tools and machinery, reading orthographic drawings independently, working to close tolerances, understanding quality control, using templates to manufacture organically shaped parts and reading orthographic drawings.</p> <p>This project will see a mixture of practical and theory lessons.</p>	<p>Unit intent:</p> <p>This half term sees the continuation of the Joiners Toolbox project.</p> <p>Students learn to use CAM to create moulds for casting. They then cast pewter to create a badge for their toolbox.</p> <p>Students learn about permanent and non-permanent joining techniques and assemble the toolbox. select appropriate finishes for the parts of the toolbox.</p> <p>This project will see a mixture of practical and theory lessons.</p>	<p>Disciplinary knowledge</p> <p>Core technical principles Designing and making principles Specialist technical principles</p> <p>CST</p> <p>The Common Good Option for the Poor Peace Creation and Environment The Dignity of Work and Participation</p> <p>Careers</p> <p>BBC bitesize lesson dedicated to careers in the creative industry</p>	<p>Unit intent:</p> <p>During their second term in D&T pupils will learn how to respond to a contextual challenge. They will be encouraged to explore the context and write their own design brief.</p> <p>One of the main focuses this term will be an introduction to industry based computer software Fusion 360 which will enable pupils to design and develop a range of creative and innovative ideas.</p> <p>Core technical and specialist technical principles will be delivered through theory lessons alongside the mock NEA, to ensure pupils have completed the course of study by Christmas of Y11</p>	<p>Unit intent:</p> <p>During this term pupils will be taught how to create manufacturing specifications which they will use to produce a final CAD model.</p> <p>Core technical and specialist technical principles will be delivered through theory lessons alongside the mock NEA, to ensure pupils have completed the course of study by Christmas of Y11.</p>	<p>Disciplinary knowledge</p> <p>Core technical principles Designing and making principles Specialist technical principles</p> <p>CST</p> <p>Dignity Solidarity The Common Good Option for the Poor Peace Creation and Environment The Dignity of Work and Participation</p> <p>Careers</p> <p>Discussion about careers in CAD/CAM and industry</p>	<p>Unit intent:</p> <p>In preparation for beginning the NEA, students will test a range of materials and processes including:</p> <ul style="list-style-type: none">• Cutting and shaping woods, polymers and metals• Line bending and vacuum forming polymers• Casting metals• Using CAD and CAM <p>These skills will be documented and will act as a reflection tool during the NEA.</p>	<p>Unit intent:</p> <p>Students will start their NEA during this half term.</p> <p>Designing and making principles are delivered through the NEA task Students must demonstrate skills in applying the knowledge of the designing and making principles to the six assessment areas;</p> <ul style="list-style-type: none">• Researching and investigating (A)• Writing a design brief (B)• Generating ideas (C)• Developing ideas (D)• Realizing an idea (E)• Reflecting and evaluating (F) <p>Section A will be completed during this half term: 10 marks</p> <ul style="list-style-type: none">• Investigating a contextual challenge• Exploring a design opportunity• Identifying a client with specific wants and needs	<p>Disciplinary knowledge</p> <p>Core technical principles Designing and making principles Specialist technical principles</p> <p>CST</p> <p>Subsidiarity: Students are given 3 different contexts to choose from Options for the poor: considering the needs of a range of clients including the poor and the vulnerable Stewardship of creation</p> <p>Careers</p> <p>Discussions into how the work produced during the NEA would allow students to gain valuable skills for future careers</p>