

Year 10 Autumn	Year 10 Spring	Year 10 Summer
<p style="text-align: center;"><u>10 WEEK STORAGE BOX PROJECT</u></p> <p><u>KNOWLEDGE & UNDERSTANDING</u></p> <ul style="list-style-type: none"> • Health & safety induction • Industry & Enterprise • Sustainability • People & Culture • Society & Environment • Social, Cultural & Moral Challenges • Production Techniques & Systems • Informing Design Decisions • Energy storage systems • Personal Protective equipment • Crowd Funding • Co-operative • Fairtrade • 6Rs • Technology push & market pull • Social, cultural & moral challenges • Scales of production <p><u>DESIGNING</u></p> <ul style="list-style-type: none"> • Rendering & oblique drawing • Two-point perspective & linking boxes • Isometric drawing, scale & line weighting • Orthographic projection & dimensioning • Design brief • Specification • Needs & wants • Product analysis • Production diary • Evaluations <p><u>HOME LEARNING</u></p>	<p style="text-align: center;"><u>9 WEEK CLOCK PROJECT</u></p> <p><u>KNOWLEDGE & UNDERSTANDING</u></p> <ul style="list-style-type: none"> • Selection of TIMBER materials and components • Selection of METAL materials and components • Selection of POLYMER materials and components • Forces & stresses • Sources & origins of TIMBERS • Sources & origins of METALS • Sources & origins of POLYMERS • TIMBER Stock forms, types & sizes • METAL Stock forms, types & sizes • POLYMER Stock forms, types & sizes <p><u>DESIGNING</u></p> <ul style="list-style-type: none"> • Design brief • Specification • Needs & wants • Analysis of context (thought shower) • Mood board • Scruffiti & Geometric shapes • Development • Production diary • Evaluations <p><u>HOME LEARNING</u></p> <ul style="list-style-type: none"> • Famous designers • Past & present companies • Physical Material Properties • Mechanical Material properties • Modern Materials 	<p style="text-align: center;"><u>8 WEEK PEWTER CASTING PROJECT</u></p> <p><u>KNOWLEDGE & UNDERSTANDING</u></p> <ul style="list-style-type: none"> • Finishes for TIMBER • Finishes for METAL • Types of TIMBER joints • Types of Adhesives • Joining METALS • Moulding& forming PLASTICS <p><u>DESIGNING</u></p> <ul style="list-style-type: none"> • Design brief • Specification • Jack Straws & Geometric shapes • Design development • Planning flow chart & Gantt charts • Evaluations • Product testing <p><u>HOME LEARNING</u></p> <ul style="list-style-type: none"> • Electrical System • Fossil Fuels & Nuclear Power • Renewable energy • Motion & levers • Linkages and Mechanisms • KD fittings & components • Moulding polymers <p><u>KNOWLEDGE & UNDERSTANDING TEST 3</u></p> <p style="text-align: center;"><u>4-5 WEEK NEA PREPERATION PROJECT</u></p> <p><u>PPE 1</u></p> <p><u>NEA STARTS 1ST JUNE</u></p>

<ul style="list-style-type: none"> • Papers • Boards • Hardwoods • Softwoods & manufactured boards • Metals • Thermoforming polymers • Thermosetting Polymers • Textiles • Design movements <p><u>KNOWLEDGE & UNDERSTANDING TEST 1</u></p>	<ul style="list-style-type: none"> • Smart & Composite Materials • Technical Textiles <p><u>KNOWLEDGE & UNDERSTANDING TEST 2</u></p>	<p>The NEA is a design and making task that contributes 50% towards the students' final mark.</p> <p>Students will be expected to complete a folder consisting of 34 A4 sheets and a working prototype. Students will be marked on the following:</p> <p>Analysing and investigating design possibilities – 10marks Producing a design brief and specification – 10marks Generating design ideas -20marks Developing design ideas -20marks Realising design ideas -20marks</p>
Year 11 Autumn	Year 11 Spring	Year 11 Summer
<p><u>GCSE Non-Exam Assessment (section A)</u></p> <ul style="list-style-type: none"> • Design opportunities • Client / Use needs & wants • The work of others • Product impacts • Initial Research <p><u>GCSE Non-Exam Assessment (section B)</u></p> <ul style="list-style-type: none"> • Research analysis • Design brief • Analysis of the brief • Product specification <p><u>GCSE Non-Exam Assessment (section C)</u></p> <ul style="list-style-type: none"> • Initial ideas X3 • Initial CAD ideas • Design Evaluation • Concept modelling X3 <p><u>PPE 2</u></p>	<p><u>GCSE Non-Exam Assessment (section D)</u></p> <ul style="list-style-type: none"> • Client feedback • Further research • Design development • Design testing • Further modelling • Final design • Working drawing • Manufacturing specification • Cutting list & costing <p><u>GCSE Non-Exam Assessment (section E)</u></p> <ul style="list-style-type: none"> • Manufacturing the prototype <p><u>PPE 3</u></p>	<p><u>GCSE Non-Exam Assessment (section F)</u></p> <ul style="list-style-type: none"> • Prototype testing • Evaluation against brief & specification • Client feedback • Summary • Modifications <p><u>GCSE Exam preparations</u></p> <p>Analysing and Evaluating -20marks</p>