

Year 7		
<p>1. Wooden Boat Project</p> <ul style="list-style-type: none"> • Workshop safety • Recognizing health & safety symbols • Communicating design ideas • Marking out with accuracy • Cutting and shaping timber • Properties & characteristics of timber • Using the pillar drill and belt sander • Using Adhesives 	<p>2. Jewellery Stand</p> <ul style="list-style-type: none"> • Target user & product environment • Communicating design ideas • Modelling design concepts • Properties & characteristics of metals • Iterative design approach • Manufacturing sheet metal & acrylic • Responding to third party feedback • Molding and forming 	<p>3. Gravity Cars</p> <ul style="list-style-type: none"> • Biomimicry & aerodynamics • 3D sketching • Testing & Modification • Block modelling • Manufacturing Diary • Environmental issues: sustainability • Interpreting Data • Workshop Independence

Year 8		
<p>4. Architecture Project</p> <ul style="list-style-type: none"> • Investigating the work of others • Zaha Hadid & Norman Foster • Target user wants and needs • Product environment • Writing a design specification • CAD CAM for design development • 3D printing & rapid prototyping 	<p>5. Ergonomic Grabber</p> <ul style="list-style-type: none"> • Ergonomic design • Anthropometric data • Product Analysis • Production aids • Iterative design • Interpreting Data 	<p>6. Micro Bit Logistics</p> <ul style="list-style-type: none"> • Electronic systems • Programming systems • Forces and Stresses • Mechanisms & movement

Year 9		
<p>1. Passive Amplifier</p> <ul style="list-style-type: none"> • Orographic Drawing • Isometric Drawing • Working with standard components • Manufacturing specification • Quality Control in Manufacturing • Adhesives • Surface finishes 	<p>2. A Home for Nature</p> <ul style="list-style-type: none"> • Exploring a Design Context • Drawing conclusions from research • Writing a design brief • Writing a design specification • Vacuum Forming • Joining Timber • Using a working drawing 	<p>3. Wind Turbines</p> <ul style="list-style-type: none"> • Renewable and non-renewable energy • Storing energy • Modelling for iterative design • Recording data and presenting data • Sustainability: The 6 R's

<p>4. Museum Souvenir</p> <ul style="list-style-type: none"> • Pewter Casting • Using CAD (2D Design) • CAM (Laser cutter) to make molds • Datums • Properties of materials • Treatments and finishes for metals • Production of metals • Art Deco design movement 	<p>5. Street Furniture</p> <ul style="list-style-type: none"> • Inclusive design • Memphis & Bauhaus Design Groups • Modelling skills • Avoiding Design Fixation • Creative design strategies • Two-point perspective drawing 	
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Year 10		
<p>6. Angle Poise Lamp</p> <ul style="list-style-type: none"> • Production aids • Joining sheet metal • Standard components: bolts & rivets • Circuit board soldering • Electronic components • Lap Joint • Bridal Joint • Orthographic Drawing • Working with standard components • Manufacturing specification • Quality Control in Manufacturing • Adhesives • Surface finishes • Seasoning 	<p>7. Storage Solutions for Shared Spaces</p> <ul style="list-style-type: none"> • Scales of Production • Stock forms and processing materials • Standard components: Fixings • Scaled Drawings • Create an Orthographic Drawing • Working with focus groups • CAD Modelling • Joining Methods • Quality control in mass production 	<p>8. Electronic Systems</p> <ul style="list-style-type: none"> • Marke- pull and technology push • Smart materials • PCB Production • Schematic Drawings • Electronic components • CNC Machinery
		<ul style="list-style-type: none"> • NEA 50% of final GCSE grade (June start)