

Year 9

1 lesson per week

Timing	Unit Title	Key Question	Knowledge & skills	Assessing Understanding
Project 1 (1.5 terms)	Clock	Design and make a three-dimensional clock inspired by an architectural style or architect of your own choice.	<p>Design:</p> <ul style="list-style-type: none"> ● Be able to identify key features of a range of architectural styles/architects from the following movements: Baroque, neo-Gothic, Art Nouveau, Art Deco, Modernist, post-Modernist. ● To collect and analyse secondary research into one architectural style/architects work. ● To create a range of thumbnail sketches for clock designs inspired by this analysis. Design thumbnails should avoid design fixation, being different in concept. ● To experiment with materials and techniques to aid idea development, including appropriate joining and forming techniques. ● To use cardboard modelling to inform idea development & design thinking. ● To develop design ideas so that they can be manufactured from resistant materials. <p>Manufacture:</p> <p>To consolidate workshop skills developed throughout KS3. This will include use of one or more of the following:</p> <ul style="list-style-type: none"> ● Use hand tools to make wood joints. ● Using lamination to form wood. ● Laser cutting. ● Use of hand tools to cut and finish plastics. ● Use of oven/strip heater/vacuum former for plastic forming ● Use of scroll saw, drilling machine and band facer. 	<ol style="list-style-type: none"> 1. Research and Analysis: Of the work of one architect/ architectural style + thumbnails sketches of a diverse range of design ideas informed by this research. 2. Design skills: Development of design thumbnails, informed by testing and trialling of materials and joining techniques. 3. Manufacturing skills: Final product and Evaluation

			<ul style="list-style-type: none"> Selection and use of a range of adhesives including PVA, liquid solvent cement and epoxy resin. 	
Project 2 (1 term)	Pewter Cast Jewellery	Design and make a piece of jewellery inspired by natural forms. The jewellery must be manufactured using the pewter casting process.	<p>Design:</p> <ul style="list-style-type: none"> Carrying out secondary research into natural forms. Generating a wide range of ideas which are different in concept and avoid design fixation, inspired by this research. Generating a wide range of ideas which are viable using the range of casting techniques available, including acrylic inlay and embossing. Presenting ideas using thumbnail sketching. Using cardboard modelling to determine dimensions of designs. Developing mould designs so that design ideas can be realised. Presenting ideas using free-hand isometric sketching Rendering ideas, taking consideration of surface texture and tone Further developing 2D CAD skills, using Corel Vector to draw up mould designs for laser cutting. Including the use of the subselect and compound shapes tools. <p>Metals:</p> <ul style="list-style-type: none"> Be able to define the terms ferrous, non-ferrous and alloy. Be able to classify metals as ferrous, non-ferrous or alloy. Be able to identify the properties of specific metals and explain why they are suitable for given applications. <p>Metals: Low carbon steel, cast iron, high carbon steel, aluminium, copper, brass, pewter and stainless steel.</p>	<ol style="list-style-type: none"> Design Skills: Research and thumbnail sketches of design ideas. Manufacturing skills: Final product

			<ul style="list-style-type: none">● Learn about low temperature casting using the pewter casting unit, including features of mould design and how to operate the unit safely.● Understand the terms embossing, debossing and inlay and apply these techniques when designing moulds/products.● Work with a range of tools and equipment to cut, shape and finish metal to a high standard: Cutting/sawing: Junior hacksaw Abrading: Cross and draw filing Finishing: Emery cloth, wet & dry paper, steel wool & metal polish.	
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