

Year 9

One 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. 2. Design skills: Design ideas informed by research and investigation into materials/techniques. 3. Manufacturing skills: Final product

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 sub-select 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. Metals: Low carbon steel, cast iron, high carbon steel, aluminium, copper, brass, pewter and stainless steel. ● Learn about low temperature casting using the pewter casting unit, including features of mould design and how to operate the unit safely. 	<ol style="list-style-type: none"> 1. Design Skills: Research and thumbnail sketches of design ideas. 2. Manufacturing skills: Final product
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Project 3 (<0.5 terms)	Food Box Delivery recipe	Develop a recipe card for a food box delivery company. The recipe card must be for a balanced meal that can be made in 30 minutes.	<p>Design:</p> <ul style="list-style-type: none"> • Develop understanding of designing balanced and nutritious meals. • Design to time constraints. • Consolidate skills in Corel Vector through the design of an ingredient-inspired recipe card. <p>Manufacture: To develop confidence and organisation when working in the kitchen. This will include the use of one or more of the following:</p> <ul style="list-style-type: none"> • Equipment including knife, scales, measuring jug etc. • Oven • Hob • Blenders 	<ol style="list-style-type: none"> 1. Design skills: 1 recipe card for a food box delivery 2. Manufacturing skills: Final product