

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.	Design: - 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. Manufacture: To consolidate workshop skills developed throughout KS3. This will include use of one or more of the following: - 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	- Research and Analysis: Of the work of one architect/ architectural style + thumbnails sketches of a diverse range of design ideas informed by this research. - Design skills: Development of design thumbnails, informed by testing and trialling of materials and joining techniques. - Manufacturing skills: Final product and Evaluation

			• Use of scroll saw, drilling machine and band facer. • Selection and use of a range of adhesives including PVA, liquid solvent cement and epoxy resin.	
Project 2 (1.5 terms)	Pewter Cast Jewellery	Design and make a piece of jewellery inspired by natural forms. The jewellery must be manufactured using the pewter casting process.	Design: • 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. Metals: • 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.	1. Design Skills: Research and thumbnail sketches of design ideas. 2. Manufacturing skills: Final product

			• 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, steel wool & metal polish.	
--	--	--	--	--