Year 12 PRODUCT DESIGN Curriculum Map

Term	Topic/Unit title	Essential knowledge (what students should know and understand by the end of the unit/topic)	Essential skills (what students should be able to do by the end of the unit/topic)
Autumn 1	Theory: Materials Practical: Pewter Jewellery	Metal: Properties of materials Enhancement of materials Forming redistribution and addition processes Finishes	Understand casting Understand how to use CAD effectively
Autumn 2	Theory: Materials continued Practical: Candlestick	Polymers: Properties of materials Enhancement of materials Forming redistribution and addition processes Finishes	Rendering and presentation techniques Modelling

Spring 1	Theory: Materials continued Practical: Lighting	Timber/paper: Properties of materials Enhancement of materials Forming redistribution and addition processes Finishes	Using CAD/CAM Design development
Spring 2	Theory: Materials continued Practical: Spinning ornament	Modern/smart: Properties of materials Enhancement of materials Forming redistribution and addition processes Finishes	Combining materials
Summer 1	Theory:	Scales of practice Digital influence Product design and development H&S	

	Practical: Drawer unit		Complexities of CAD/CAM
Summer 2	Theory: Practical: Start NEA - research, spec, designs	Protecting designs Designing for manufacture, maintenance Feasibility studies Design communication How to conduct research Application of previous knowledge: Design strategies Communication of design ideas	Independence

Year 13 PRODUCT DESIGN Curriculum Map

Term	Topic/Unit title	Essential knowledge (what students should know and understand by the end of the unit/topic)	Essential skills (what students should be able to do by the end of the unit/topic)
Autumn 1	Theory: Design Theory Practical: NEA - design development	Design styles and movements Technology and cultural changes Application of previous knowledge from Y11/12: Independence Communication of design ideas Prototype development CAD/CAM Sustainability and the environment	Application of previous knowledge from Y12: Quality of work How to make card models
Autumn 2	Theory: Methods and processes Practical: NEA - design development	Design methods and processes Critical analysis Application of previous knowledge from Y11/12: Independence Communication of design ideas Prototype development	Application of previous knowledge from Y12: Quality of work How to make card models

		CAD/CAM Sustainability and the environment	
Spring 1	Theory: Selecting appropriate processes Practical: NEA - making	How to select the most appropriate tools and equipment Accuracy in design manufacture Application of previous knowledge from Y11/12: Independence Project evaluations	Application of previous knowledge from Y12: Independence Accuracy whilst measuring and marking out How to use a template Safe use of hand tools and machines How to apply a finish Quality of work
Spring 2	Theory: Product design Practical: NEA - evaluation	Responsible design National/International standards Application of previous knowledge from Y11/12: Independence Project evaluations	

Summer 1	Theory: Revision Practical: Revision	Exam question practise Application of previous knowledge from Y11/12 Exam question practise	
Summer 2	Exam		