Year 9 Design Technology: Personalised Learning Checklist (PLC)

Year 9	Electronics & Product Design	Steady Hand Game (DT)

I can:	R	A	G
Know how to explore a design brief and adapt to a personalised context/design direction.			
Choose and justify an appropriate target market and research existing solutions in correspondence with this.			
Know Andy Warhol within the Pop Art design movement and be able to describe key features of this work (bright vibrant colours, black outline, cartoon style, humour, onomatopoeia).			
Confidently draw a variety of design ideas appropriately aimed at a chosen target market and be able to justify this by annotating the designs.			
Confidently manufacture a butt joint with precision, using millimetres.			
Describe the key material properties (aesthetics, durability, cost, purpose) of pine, MDF and acrylic, and justify these as chosen materials for the steady hand game manufacture.			
Know the functions of each electrical component (capacitor, thyristor, resistor, LED, buzzer, reset switch) within the steady hand game circuit, and be able to explain how together, the components make the game work.			
Understand the functions of an input, output and power within a circuit.			
Independently solder a PCB (printed circuit board) with an operational functioning output (LED & buzzer).			
Programme and use an IC chip (integrated circuit chip) using Picaxe software, to make the input and output components function correctly within the circuit.			
Know how certain materials conduct electricity.			
Know different types of fixings and when you would use them; temporary & permanent (adhesives, nails & screws).			
Confidently use 2D Design and the laser cutter and integrate this into traditional woodwork practises.			
Be able to reflect, evaluate and develop, throughout the design and manufacturing process.			

Key Vocabulary for this project

Design context, Pop Art, Andy Warhol, PCB (printed circuit board), Electronic components, capacitor, thyristor, resistor, LED, buzzer, reset switch, input, output, power, fixings, temporary, permanent, adhesive, CADCAM (computer aided design / computer aided manufacture, conducts, properties.

Assessment Result	Mark:	%

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