Systems and Controle Outline for Year 7,8,9

	Core learning	Challenge or extension learning	Key assessment tasks for KS3
Year 7 First Rotation	<u>Clock</u> • Design & Make a simple electronic product • Workshop Safety • Introduction to basic CAD/CAM techniques • Temporary fixings • Designing for yourself • Using 2D Design to design and manufacture a clock face	• Looking at similar existing products and designing a set of products • Technology vocabulary tasks • Produce a poster about the laser cutter	• Plastics test • Quality of Final Outcome • Evaluation
Yr7 Second Rotation	<u>Steady hand game</u> • Introduction to soldering and basic electronic component assembly • Exploded Views • Designing a base and housing for the electronics • Construction of a simple frame using housing joints or vacuum forming • Cutting and shaping wire • Use of pillar drill • Use of Serif to design outline shapes for a backboard • Surface decoration using water based paint • Designing with others - paired	• Ergonomic design • Turning plastics on the lathe • Memphis Group • Promoting an event	• Electronics test • Successful product outcome – fitness for purpose • Peer review
Yr 8 First Rotation	<u>Steel Candle Holder</u> • Initial ideas using Solid Works or Sketch Up • Developing ideas through modelling • Developing a working drawing • Creating a cutting list • Joining techniques for metal • Filing, smoothing and surface finishes for metal • Designing for a place	• Develop a design for a copper- enamelled brooch. • Architecture case study and structure • Outdoor metalwork and sculpture	• Metals test • Stability and aesthetics of final outcome • Presentation photo and evaluation
Yr 8 Second Rotation	<u>3D Textile Organiser</u> • Creating designs inspired by the work of artists like Hepworth and Gaudi • Recycling textiles and corrugated cards • Fabric construction • Environmental issues • Group work emphasis	• STEP activities - Waste to Wear • Fact file based on related web links and personal research	• Textiles test • Finished • Presentation on eco friendly fashion accessories

Yr 9 First Rotation	<u>Night Light</u> • Intermediate circuit soldering • Component recognition and use of circuit diagrams • Product Analysis of lights • ACCESSFM to produce specification • Housing design • Orthographic drawings • Use of circuit wizard electronics software • 6 R's and Sustainability	• Solar adaptations • STEP online activities • Lighting timeline	. • Tool theory test. • Quality of soldering • • Extent and success of specification .
Yr 9 Second Rotation	<u>Art Deco Casting</u> • Designing "in the style of" • Investigating jewellery findings • Developing a variety of ideas • Simplifying existing designs to make them suitable for casting. • Using CAD/CAM to cut and engrave a mould • Casting pewter and surface finishing • Production line manufacturing - teamwork	• Casting in industry and scales of production. • Other materials used in casting • Be enterprising challenge	• Processes and Materials test • Breadth of initial design ideas • Quality of finished outcomes.
End of KS3			