

Year 9

Pewter casting

Look at existing designers work and culture to inspire a simple design using pewter. (Differentiate by allowing pupils to add acrylic pieces.)

Keywords	Key skills	Equipment/ processes used/ materials
Pewter Culture Inspiration Casting Ferrous Non-ferrous Alloys	CAD/CAM (LASER CUT) Pewter casting Design influences Work of others	Pewter ingots Pewter casting kit MDF-moulds Laser cutter Steel wood Buffer Thread/cord

Night Light.

Using simple vacuum forming process to produce base. Use laser cutter to design and make the decorative element. Simple electronic circuit for produce light.

Keywords	Key skills	Equipment/ processes used/ materials
Iterative process. Laser cutter CAD CAM Thermo plastic Thermosetting	Iterative process. Laser cutter 2D design Problem solving. Forming process	Laptops Paper Acrylic Scanner Night light kits Vacuum former HIPS Strip heater Soldering iron Solder

FPT Automaton toy

Using timber/ textiles materials to create a product to include forces, stresses and mechanisms. Pair work?

Keywords	Key skills	Equipment/ processes used/ materials
Lever Cam (Names of different cams -SNAIL, PEAR, EGG, ECCENTRIC) Motions/ forces (Oscillate, reciprocate, linear, rotary)	Lap joint Accuracy in measuring and cutting QA/QC Marking Hand tools Tolerances	Pine Tenon saws Bench hooks Laser plywood Hardboard PVA/wood glue Belt sander Power /PILLAR drill Timber (some pre cut) CAMS Dowel