

Cad Cam Bling



Students use 2D Computer Aided Design (CAD) software to design a piece of jewellery. This is then Manufactured (CAM) out of card using a Laser cutter to produce a mould. Students then cast their own jewellery using a low melting alloy similar to pewter. Once this has cooled students drill and finish their piece of jewellery. Students evaluate the activity with a write up and photographs of their work, demonstrating all of the processes, tools and equipment that they have used.

Location: STAR room.

Group size: 4-16 students.

Recommended Level: KS3

Cost: £3 per Student.

Consumables: Display Board, Low melting alloy.

Tools and Equipment: Laser cutter, Safety Glasses, MDF Case, 2x Heavy duty Clips, Heat proof gloves, Apron, File, Tweezers, Pillar drill, 5mm drill bit.

Staffing: Mr. Emanuel & Mr. Woodward.

Time needed: 2Hrs Minimum.

Extension Tasks: Extension tasks are available to suit the group. For example... Students can go on to produce a 3D Presentation drawing of their work using CAD. Orthographic and other engineering drawings can also be produced. We also have a shot video that demonstrates the use of CAD CAM in the movie props industry (Case study: BLADE 2) and Music industry (Case Study: Guitar Making)



Curriculum Areas: Engineering
Resistant Materials
Compliant Materials
Art
Maths
Science

Software used: Techsoft 2D design
MS word 2008
Pro Desktop (Extension Task)

Subject Specific words

Tools and Equipment: Laser cutter
MDF
Clips
Gloves
Apron
File
Tweezers
Pillar drill
Drill bit

Health and Safety: Sharp objects
Hot objects
Extraction for Laser Cutter

Functional Skills: Hand Eye Co-ordination
ICT – Use of CAD and Evaluation
Using appropriate tools and equipment
Finishing materials
Safe use of tools and equipment
Working on a Focused Practical task
Working to a deadline

Every Child Matters: Enjoy and Achieve



Engineering



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EXCELLENCE AND DIVERSITY

