



Content – JitterSpin

Introductory unit

Students will undertake a H&S session completed with a H&S worksheet as a reminder for expectations in the workshop environment

Learning outcome: This project will allow students to experience a variety of processes that could/would be used when completing the Product Design course at GCSE level. Students will Design and Create a Passive Speaker that incorporates several different manufacturing techniques such as CAD CAM, Laser cutting, Electronics and bonding of materials. Students will design their products graphically as a theme and then practice using CAD to shape some of the components of their product. The main focus of this project will be on CAD to allow competency in using technology to develop 3D modelling

Design Theory

Big question: Can I use Computer Aided Design to create a product with many manufacturing processes?

- **Design ideas** – Use of CAM to design components.
- **Manufacturing** – use of a variety of manufacturing techniques including laser cutter, 3D Printing, Vacuum Forming, injection moulding and Soldering.
- **Circuit symbols / diagrams** – knowledge of components and fixing and fittings. Soldering.

Practical / Making Skills

Big question: How are tools and techniques applied to the construction and making of the product that has been designed prior to making?

- **CAD** – Use of CAD
- **Soldering** – Following H&S and using correct techniques to solder and join electrical components.
- **Construction & Finishing** – using different bonding techniques and fixings and fittings
- **Health and Safety** – using different Making techniques with quizzes, demonstrations and links

Evaluation / Review

Big question: How will I know if my product is of a good quality and what links do I need through the project?

- **General Evaluation of product** – Evaluating in bookwork and verbal looking at improvements.

Prior learning

Prior learning required

Knowledge of different types of manufacturing processes and basic electrical components.

Global/IOM/Subject Links

Links to other subjects

- H&S → general safety techniques
- Manufacturing → Engineering sectors

Links to Global picture

- Recycling and reusing of materials
- Knowledge of manufacturing techniques

Links to IOM

- knowledge of manufacturing sector on island using them as an example of manufacturing in engineering.



CARE Links

CARE Values

COURAGE	'I will challenge myself and be brave in my learning'
ASPIRATION	'I will strive to do my utmost, to achieve my goals'
RESPECT	'I will be polite to all and look after our school environment'
ENDEAVOUR	'I will aspire to complete my learning to the best of my ability'