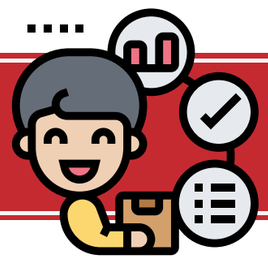
Product Design Key Stage 3 Learning Journey





Evaluate

Students will evaluate their design ideas and their making skills throughout the project. They will write a formal evaluation their prototype at the end of the project





Make

- Students will learn how to use the mortiser to create a mortise joint
- Students will learn how to make a recess using a router
- Students will add moving levers and mechanisms to their pinball machine



Design

Design a pinball machine to be sold in the gift shop of a place of interest e.g. Roald Dhal museum

Year 9 Overview

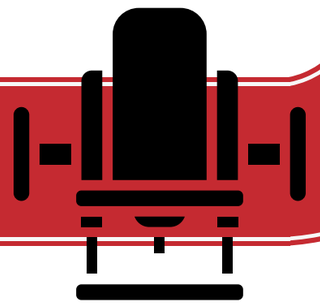
Students will engage in the Pinball Project. Students will research a place of interest and design and make a fully functioning pinball game to be sold in the gift shop. The project combines used of CAD/CAM and traditional joinery techniques. Students will explore the importance of prototyping and modelling ideas.

Year 9



Research

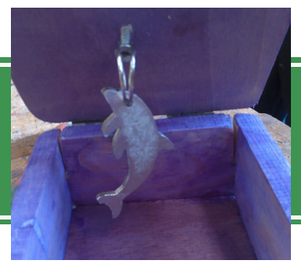
- Use of router and mortiser
- Research a place of interest
- Prototyping
- Craft knife safety





Evaluate

Students will evaluate their design ideas and their making skills throughout the project. They will write a formal evaluation their fidget board at the end of the project.



Make

Students will learn how to use/do:

- Pewter casting
- Mould making
- Laser cutter
- Comb joints
- Screw driver



Year 8 Overview

Students will design and make a gift box with a pewter cast gift inside. They will evaluate their design ideas and their making skills throughout the project. They will write a formal evaluation of their outcome at the end of the project



Make

Students will make a wooden gift box and cast a product e.g. a key fob in pewter.





Design

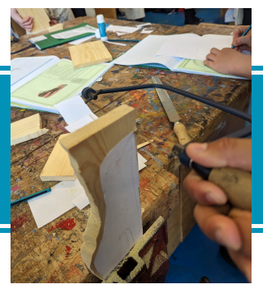
Students will design and make a pewter cast product to celebrate an event or person



Research

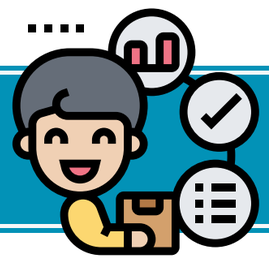
- Use of jigs and templates
- Finishes
- Fixtures and fittings
- Metals and metal processing

Year 8



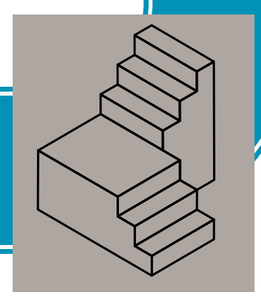
Evaluate

Students will evaluate their design ideas and their making skills throughout the project. They will write a formal evaluation their product at the end of the project



Isometric Drawing

Students will learn the principle and techniques of isometric drawing and its benefits in the design process.



Make

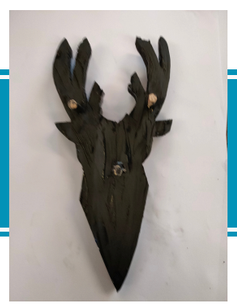
Students will use the following equipment:

- Coping saw
- Tenon saw
- Steel rule
- Try-square
- Pillar drill
- Disc sander
- Heat press



Make

Students will make a wooden key hook focusing on the health and safety of hand tools and machines.



Design

- Students will design a wall mounted key hook for the home.
- Drawing technique of isometric drawing will be taught

Year 7 Overview

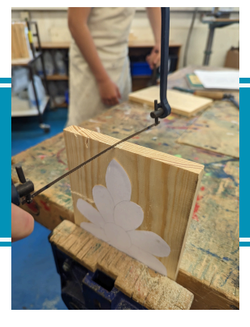
Students will engage in the Key Fob Project. They will learn the skills to use tools and equipment in the workshop safely, appropriately and with a degree of accuracy. Tools and They will learn finishing techniques for materials such as plastic, wood and metal.

Year 7



Research

- Safe conduct in the workshop – health and safety
- Uses of tools and equipment
- The properties and characteristics of timbers
- The 6 R's





"Design is not just what it looks and feels like. Design is how it works." Steve Jobs