

Yr8 Project: Textiles

The Year 8 Monster Pencil Case project is designed to introduce pupils to key textile construction skills through a creative and engaging make. It gives students the opportunity to design, decorate, assemble and evaluate a functional product while developing accuracy, control and confidence in a workshop setting.

This unit is appropriate for Year 8 because it provides a manageable but ambitious next step in KS3. Students build on earlier practical experiences by learning how to use pattern pieces, apply appliqué, sew with a machine, insert a zip and complete a finished textile product with increasing independence.

Yr8 Project: Jewellery box

The Year 8 Jewellery Box project is designed to introduce pupils to key woodworking and manufacturing skills through a creative and engaging practical project. It gives students the opportunity to design, manufacture, assemble and evaluate a functional product while developing accuracy, precision, control and confidence when working with timber and workshop tools.

This unit is appropriate for Year 8 because it provides a manageable but ambitious next step within KS3. Students build on earlier practical experiences by learning how to accurately measure and mark out timber, cut and shape pine components, produce an interference-fit frame and apply a real wood veneer to create an attractive and durable top. Students also develop their understanding of material properties, construction methods and finishing techniques, working with increasing independence to produce a high-quality finished jewellery box.

Yr8 Project Title: Smart Materials

The Year 8 Smart Materials project is designed to introduce pupils to materials that respond to changes in their environment and to show how these properties can be used in product design. It gives students a focused opportunity to investigate polymorph, memory wire and thermochromic paint, then apply that knowledge to a design task.

This unit is appropriate for Year 8 because it builds curiosity and technical understanding at a stage where pupils are ready to move beyond basic materials knowledge. The sequence helps them understand that material choice is not just about appearance or strength, but also about how a material behaves in use and how it can improve a product for a specific user.

Yr8 Project Title: Pewter

Project Overview: During this unit, students will create their own design for a pendant or bracelet charm. They will learn how to:

- Create their own design to a given size
- Make their own mould either by hand or using CAD
- Cast using a low temperature casting unit
- Work safely and understand why the casting process requires specialist personal protective equipment
- Finish and polish metal
- Use a hand punch to create a hole

Students will gain knowledge of working with metals and be able to explain why metal products are batch produced and the advantages of using moulds in industry.

Yr8 Project Title: Structures

The Year 8 Structures project is designed to introduce pupils to structural design through the context of bridge building. It gives students the opportunity to research different bridge types, understand how structures are made stable, and design a prototype that responds to a realistic local brief.

This unit is appropriate for Year 8 because it develops technical understanding in a practical, engaging way while also building on early design and materials knowledge. Students are expected to think about strength, stability, aesthetics, purpose and materials, which helps them understand that good structures must meet more than one requirement.

Yr8 Project Title: Pizza cutter (Foam modelling)

Project Overview: Students will also design and produce an ergonomic handheld pizza cutter from modelling foam. They will learn how to:

- Analyse the work of others to help inspire their own ideas for a pizza handle
- Make their prototype ergonomic through the use of initial sketching, card and foam modelling
- Select the correct tools for shaping their foam model
- Evaluate their work to improve their ideas.

Yr8 Project Title: Microbit

8 Project Title: Programming and using a Microbit controller to solve problems

Students will be taught how to program a Microbit to experience the many functions that the system offers. They will then develop their programming skills to use the Microbit to solve a range of problems ranging from digital signage and handheld games to security.



Yr8 Project Title: Butchery & Patisserie

Project Overview: This is an introduction to foods from around the world. Students will make a variety of dishes from various countries whilst learning about handling raw meat safely and the importance of staple foods across the world. These are the dishes students will make:

- Chicken kebabs
- Sweet and sour chicken
- Chicken curry
- Quiche
- Macaroni cheese
- Savoury rice
- Calzone
- Chelsea buns
- Victoria slices
- Ham and cheese turnovers with homemade flaky pastry
- Showcase lesson- this is where students will demonstrate the skills they have learnt during their food rotation whilst cooking independently, following a recipe.

