# DESIGN TECHNOLOGY

**BTEC 3D Design double and triple courses**

Mirfield College

## KS4

### YEAR 11

**Baseline Assessment:** What do you already know about DT?

**Introduction to the workshop:** Health and Safety Team building activities

**POP ART CLOCK PROJECT**

**Materials:** Wood classification. Where does timber come from?

**Design:** Designing for users Rendering Hand-drawn design development

**Make:** Joining methods – comb joints Shaping manufactured boards Marking out and drilling material

**Evaluate:** What makes a good clock? How can you improve your skills?

**CRESS HEADS PROJECT**

**Materials:** Timbers Classification. What is a manufactured board?

**Design:** Designing with restrictions Orthographic Projection & Rendering

**Make:** Applying finishes – use acrylic paint and vinyl to decorate their final piece

**Evaluate:** Does your product work? How can you fix problems?

**Materials:** Working with card, cutting and finishing techniques.

**Design: CAD** What is computer aided design? Learn to use the basics of Photoshop software to design products

**Die Cutting:** Die cutting. What does it do? How is it used in industry?

**Evaluate:** How has CAD / CAM helped you make a product?

### YEAR 8

**DE STIJL PASSIVE AMPLIFIER PROJECT**

**Evaluate:** At each stage of making, how can you improve your product? Would you change any thing?

**Make:** Develop independence in CAD using Photoshop and Illustrator software to make complex design ideas.

**Design:** Designing for a user and client. What is an orthographic projection? Develop design ideas using CAD. Designing using the style of another designer.

**Materials:** Working with plywood and vinyl to develop a working passive amplifier

**MEMPHIS MUG PROJECT**

**Materials:** Timbers - hard woods and softwoods, why do we use them?

**Make:** What is CAM? Use the laser cutter to produce your final product!

**Design:** Isometric projection, CAD development

**Testing / Modelling:** Will my product work? What can I do to improve it?

**Make:** Can you make an accurate product using machines and tools independently?

**Evaluate:** What skills have you developed? Test your product and consider how you would improve it.

### YEAR 9

**CONTEXT: LIGHTING IN THE HOME**

**PHONE CASE AND BLISTER PACKAGING**

**Make:** Use a range of techniques including vacuum forming and sublimation printing to create a phone case and packaging.

**Make:** Use a wide range of skills, materials and processes to develop your unique product.

**Design:** Focus your idea on the work of famous designers, use illustration or graphic design as inspiration.

**CONTEXT: ENCOURAGING TEENAGERS TO HAVE A HEALTHY LIFESTYLE**

**Make:** Develop your design through iterative processes and modelling, testing & evaluating before making a final product.

**Design:** Using removal techniques to develop a lighting solution based on the given context and needs of your client

**Make:** Addition processes & wood joints. Using skills to develop high quality craftsmanship products.

**Design:** Practicing Isometric Projection and rendering skills. Orthographic projection.

**Materials:** Working with hardwoods and specialist timbers. Working properties and recognizing materials.

### YEAR 10

**ALTON TOWERS STANDEE**

**Research:** Find out about mechanisms and movements and incorporate them into your standee

**Materials:** What materials will be appropriate for your product? What materials are sustainable?

**ENERGY PROJECT**

**Research:** Research a range of renewable and non-renewable energy sources and materials

**CELEBRATION CONFECTIONARY PACKAGING**

**Research:** Find out about art and design movements and look at the work of famous designers for inspiration.

**Specification & Brief:** Clarify the needs and wants of the project writing your own brief & specification in response to the context.

**SMART AND MODERN MATERIALS**

**Materials / Make:** Experiment with smart and modern materials and incorporate them into a graphic product.

**GCSE NEA CONTEXTS**

**Investigate the design possibilities:** What is the design context? What research can you carry out to gather ideas?.

**Initial Concept Sketches:** What ideas do you have already? Can you visualize them?

**Section A:Research & investigation** Follow on from your summer task to further understand the context. Client interviews, product, site analysis and designer research.

**Section B: Specification & Brief:** Clarify the needs and wants of the project writing your own brief & specification

**Section C and D: Generate & Develop Design Ideas:** Develop your sketches and communicate ideas. Developing them using modelling techniques

**Section E: Realise Design ideas:** Manufacture your product using skills and processes used throughout your DT journey.

**Section F: Evaluate & Test:** Gain feedback throughout your project, and test your final product – have you met your brief?

**Core content and specialist knowledge:** Revise and practice exam papers in preparation for your final exam in DT.

**EXAM REVISION**

**FINAL GCSE EXAM 50% OVERALL**

**NEA COURSEWORK 50% OVERALL**

After narrowing down your DT choices at the end of year 8 you will focus your studies in two DT disciplines in years 9, through exciting, real life contexts. Deepen your understanding of DT in the world around us whilst developing products that help various needs and users.

Work in more depth on projects, honing your practical skills, improving your resilience & problem solving whilst developing independence in the workshop/ design studio.

Experience a wide range of fun and exciting projects that teach you valuable skills in the workshop and design studio, understanding different materials and how they work.

## KS3