DESIGN TECHNOLOGY

YEAR 11

FINAL GCSE EXAM

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

EXAM REVISION

AO3: Evaluate & Test: Gain feedback throughout your project, and test your final product – have you met your brief?

AO2: Realise Design ideas: Manufacture your product using skills and processes used throughout your DT journey.

AO2: Generate & Develop Design Ideas: Develop your sketches and communicate ideas. Developing them using modelling techniques

NEA COURSEWORK

AO1: Specification & Brief: Clarify the needs and wants of the project writing your own brief & specification

AO1:Research & investigation Follow on from your summer task to further understand the context. Client interviews, product, site analysis and designer research.

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

Investigate the design possibilities: What is the design context? Analysing the detail and potential problems and clients.

GCSE NEA CONTEXTS

Make: Confirm confident use of machinery and tools. Experience combining materials, and manufacturing processes like vacuum forming.

Practical Skills

Research, Design, Develop, Make, Evaluate: Introduction to each section of the NEA in a trial portfolio .

Mock NEA

Electronics: Use basic KS3 electronics knowledge to build LED circuit for lamp.

Textiles: Learning about the properties of textiles and how to incorporate them to improve product functionality.

Polymers: Building on KS3 knowledge of polymers to make a polypropylene lamp.

Forces and Stresses: Using a range of forces and stresses to produce a keyring.

Finishing: Testing and evaluating a range of different finishing methods and products.

Joining: Carrying out a range of wood joints. Building skills in specialist tools and equipment to create a box.

Materials & Properties

KS4

YEAR 10

Evaluate: Testing product with client and against specification. Suggesting how to improve it.

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

Testing and Prototyping: Use a materials to make a scale model in order to test and redesign using iterative process.

Design: Using existing skills orthographic, isometric, and 1-point perspective to develop design ideas.

Client Wants and Needs: Identifying a relevant client and researching their wants and needs including anthropometrics.

Design and Make

The Work of Others: Investigating the work of other iconic designers inline with GCSE requirements

Independent Research

Material Processes: Researching material processes to be able to link materials and methods of manufacture like injection and blow molding.

Design Contexts: Taking what we learnt in year 8 and applying it to an open brief.

A Safe and Comfortable Home

To gain an understanding of meeting others needs and designing for someone else. To explain how designers have influenced the products we use today. To develop range of machinery skills and confidence in this area to develop independence.

Brief and Specification: Learning to write individual design briefs and specification points to help us design with purpose.

Product Analysis: Researching the work of other designers to inspire own design ideas.

Designing: Revisiting 3D drawing techniques and developing 2D by looking at orthographic projection.

Make: Develop use of hand tools and experience a range of materials, boards, papers, polymers and timbers.

Evaluate: Evaluating developed skills? Testing product and suggesting how to improve it.

Crumble: Looking at electronic circuits. Building initial knowledge of programmable / non/programmable components.

Electronics & Programming

YEAR 9

Passive Amp Project

Sustainable Materials: Linking knowledge of sustainability to material choice.

Material Properties: Revisiting properties of materials and building on existing knowledge, looking at stock forms to make informed choices.

Sustainability: Recapping the 6R's? Researching sustainability issues in the media.

Design Contexts: Investigate what a design context is and analyse 'Working Towards A Sustainable Future.

Materials

Working Towards A Sustainable Future

To gain an understanding of how to be sustainable. To explain how you can be more sustainable and what can be done with our resources. To develop range of machinery skills and confidence in this area to develop independence.

Materials: Investigating polymers, looking at types and categories, Thermo-Forming and Thermo-Setting

Sustainability: Investigating the 6R's? Looking into being a sustainable designer.

Traditional Methods: Looking at the advantages and disadvantages of traditional methods vs CAD/CAM

The Work of Others: Analysing existing products using ACCESS FM

Introduction to 1 Point Perspective: Learn the principals of 3D drawing.

Introduction to Isometric : Develop 3D drawing techniques on an isometric grid.

Design Strategy

Make: Using polymers to introduce the safe use of hand tools and machinery.

Evaluate: What makes a good maze game? How can you improve your skills?

Iterative Design Redesign of product incorporating improvements.

Maze Game

YEAR 8

KS3

Sustainability & Materials

Make: Investigating CAM? Use the laser cutter to produce a final product!

Prototype: Testing products to make sure they work. Then making improvements and modifications.

Design: Looking at how products are designed and made using computers? Looking at the advantages and disadvantages.

CAD CAM

Baseline Assessment: Finding out what DT skills and knowledge are already known.

Introduction to the workshop: Focusing on health and Safety in the workshop and looking at risk

YEAR 7

To develop knowledge and understanding of a design technology in school. To develop range of machinery skills and confidence in this area to develop independence. To evaluate the differences between traditional methods and modern methods for designing and manufacturing.