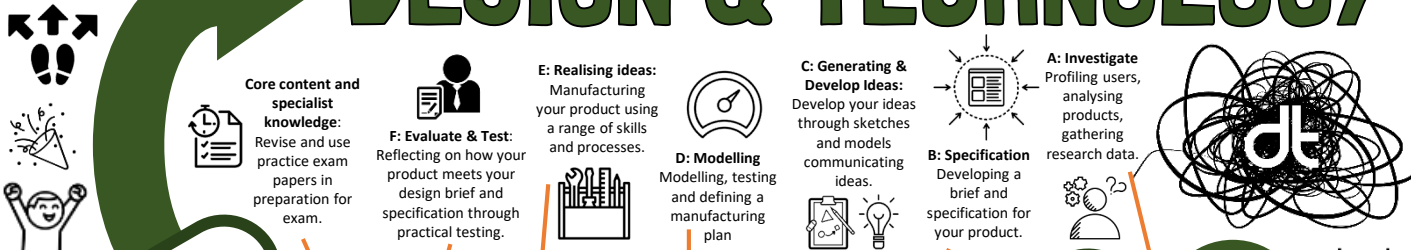


DESIGN & TECHNOLOGY



EXAM
FINAL EXAM

Core content and specialist knowledge: Revise and use practice exam papers in preparation for exam.

F: Evaluate & Test: Reflecting on how your product meets your design brief and specification through practical testing.

E: Realising ideas: Manufacturing your product using a range of skills and processes.

D: Modelling
Modelling, testing and defining a manufacturing plan

C: Generating & Develop Ideas: Develop your ideas through sketches and models communicating ideas.

B: Specification
Developing a brief and specification for your product.

A: Investigate
Profiling users, analysing products, gathering research data.

YEAR 11

NEA
DESIGN & MAKE

Design Theory: Inspired by key design movements, and iconic products

Iterations
Developing a wide range of designs.

UCD: Designing for specific users using anthropometrical data and ergonomics.

Resistant Materials: Manufacturing a mixed material product for a key user.

Graphics: Developing a striking 3D net for a drinks carton, along with a brand.

Socioeconomics: Investigating into the influences on product design.

CAD: Advanced CAD, applying ergonomic theory & inserts.

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

Sustainability: Environmental and moral needs of product design.

RAZOR DESIGN
ERGO-MODELLING

Robotics: Using microcontrollers to control and design robotics.

Teams: Work as a design team, to merge ideas and work to briefs

Modelling: Develop your design through iterative modelling.

Creativity: Using techniques such as biomimicry to create design.

Craft Skills: Addition processes & wood joints. Using skills to develop high quality craftsmanship products.

Design: Mastering Isometric and rendering skills, iterating designs.

YEAR 10

MOVE
ELECTRONICS & MECH.

Testing: Using modelling techniques to test and trial ahead of manufacture

Motions, movements & levers: How things move.

Electronics: Applying programming knowledge to design.

Materials: Working properties, and joining materials.

Manufacturing: Concrete casting, materials theory, routers, jigs and many more!

CAD: Assembling parts together, creating orthographic drawings and 3D printing.

SKILLS STICK
RESISTANT MATERIALS

LIT
TECHNIQUES & PROCESS

Learning about foundation principles in the design and manufacture of products for specific users.

Experience of multiple material areas with associated skills and theory.

USE THE FORCE
ENGINEERING DESIGN

Ratio: Applying maths to calculate velocity ratio & mechanical advantage.

Materials: Working properties, and joining materials.

Manufacturing: Concrete casting, materials theory, routers, jigs and many more!

CAD: Assembling parts together, creating orthographic drawings and 3D printing.

MOOD LIGHTING
METALWORK & DESIGN

Metalwork: Understanding material properties, and honing fine motor skills.

Evaluate: At each stage, how can you improve your product's performance?

CAD: Develop independence in CAD using 3D design software to make complex design ideas.

Industry: Gain experience of working in industry for the day to a real world brief

Electronics: Understanding capacitance, and astable circuitry

Users (UCD): User centered design, and creativity techniques.

YEAR 9

MEDIA PLAYER
3D CAD & USER DESIGN

Processes: Designing formers, vacuum forming and vinyl cutting

Teams: Work as a design team, to merge ideas and work to briefs

ARCHITECTURE
MATERIALS & MODELS

Model: Using card to model complex structures, and present ideas

KEEP OUT!
ELECTRONICS & PLASTICS

Learning about foundation principles in the design and manufacture of products for specific users.

Experience of multiple material areas with associated skills and theory.

ILLUMINATIONS
CAD & ELECTRONICS

Materials: Polymers Classification. What is a polymer? What is a circuit?

Electronics: Circuits, what components do, and, resistance theory.

Design: Designing for users, CAD design development, creativity and range extension.

Product Analysis: What makes a product suitable, or desirable? How can we learn from others?

WHAT'S IT HOLDING
WOODWORK & JOINTS

Materials: Wood classification. Where does timber come from?

Make: Measuring, wood joints, use of hand and machine tools

ARCHITECTURE
MATERIALS & MODELS

Computer Aided Design: Begin to master 2D CAD, and experiment with 3D.

DESIGN SKILLS
GRAPHICS & MODELS

Graphics: Drawing for purpose and for explanation (isometric)

Baseline Assessment: What do you already know about D&T?

Introduction to the workshops: Health and Safety

YEAR 8

YEAR 7

Welcome! Settling in, equipment and group identity

