

# DESIGN TECHNOLOGY To Engineering GCSE



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

**FINAL GCSE EXAM**



**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

**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?



**YEAR 11**

**NEA COURSEWORK**

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

**Make:** Use a wide range of tools and processes to produce your final product. You decide!

**Design:** Reference key design movements to develop a stylish functional product.

**Materials / Make:** Use materials you have not combined before such as concrete, acrylic and timber to develop a unique stylized product.



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

**WIND CHIME**

**BRIDGE DESIGN**

**GCSE NEA CONTEXTS**

**YEAR 10 GCSE ENGINEERING**

**KS4**

**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 architecture or product design as inspiration.

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

**Design:** Using removal techniques to develop an organic shaped box based on nature & biomimicry.

**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.

**ENGINEERING STAND**

**FLAT PACK PROJECT**

DT in year 9 works through exciting, real life projects. Deepening your understanding of DT and Engineering in the world around us whilst developing products that help various needs and users.



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

**Cams / motions & movements:** What do cams do? How do they work?

**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**

**ACOUSTIC SPEAKER PROJECT**

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

**Make:** Develop independence in CAD using 2D design software to make complex design ideas.

**Design:** Designing for a user and client. What is an isometric projection? Develop design ideas using CAD.

**Materials:** Working with acrylics and circuitry to develop a working night light.

**NIGHT LIGHT PROJECT**

**Make:** Thermo - Forming Shaping manufactured boards Basic circuitry and soldering

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

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

**Design: CAD** What is computer aided design? Learn to use the basics of 2D software to design products

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

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

**YEAR 8**

**MONEY BOX PROJECT**

**TEXTILES**

**Graphics CAD CAM**

**MOVING TOY PROJECT**

**YEAR 7**

**KS3**

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

**Make:** Wood joints Use of hand tools and machines

**Design:** Designing for users Rendering CAD design development

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

**Introduction to the workshop:** Health and Safety

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

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

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