

Sybil Andrews Academy

The best way to predict the future... is to create it.

KS3 Design Technology 2024/25

Learning journey



Year 9 Product Design

Designing solutions for design problems Understanding design, Iterative and user centred design, sketching, testing, smart materials, modelling, ergonomics, anthropometrics, 3D outcomes

Year 8 Technical Drawing & CAD

Developing skills and understanding of technical drawing techniques used to communicate design solutions. Equipment, Isometric, Orthographic, Perspective, Rendering, Thick & Thin line. Introduction to 3D CAD (Solidworks)

Year 7 CAD/CAM

Learn how to design using CAD. Design and manufacture a bookmark that is based on a favourite book and suitable for the intended user.

Design Brief, Specification, User needs, CAD/CAM, 2D Design (CAD), Designing for manufacture, Laser cutting (CAM)



Year 10 GSCE Design & Technology (AQA)

Year 9 Electronics & Systems

Understanding electronics, programmable components and building circuits. Electricity, Fossil fuels, Alternative energy, Electricity production, Electronic components, Circuits, PCB's, Soldering, Building simple electronic circuits, Fault finding. Build a torch for use in product design. Building systems to control inputs and outputs through a PIC interface. Systems, Inputs, Outputs, Feedback, PICS, Coding a Crumble, LDR's, LED's, Sparkles.

Year 8 Metals

Learn all about metals and use your CAD/CAM skills to make a small, metal cast key-fob. Sources, Types, Characteristics/properties, CAD/CAM, 2D Design, Design for manufacture, Pewter casting, Metal refining/finishing.

Year 7 Timber

Learn about the importance of timber and develop core workshop skills in the manufacture of a timber based product.
Hardwood, softwood, manufactured boards. Material properties. Brief & Specification. Design and manufacture. Health & Safety. Core workshop skills using timber.



