

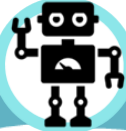


Design Technology

Year 7

Graphics

3D drawing practices and presentation skills



Mechanisms

Linkages & cams. Wood tools and safe working practices.

Nutrition

Healthy food choices: Knife and hob skills



Year 8

Electronics

Components, soldering, CAD

Material Properties

Plastics/Metal properties, workshop practices; components & sustainability



Dietary Needs

Creating Healthy dishes; Adapting recipes to meet needs.

KS3- KS4/5 Subject

Skills Learnt:

KS3

- ❖ Drawing skills: 2D, 3D & Computer Aided Design.
- ❖ Safe working practices and safety legislation.
- ❖ Working properties of Ingredients, Wood, Metal and Plastics. Analysis & problem solving.
- ❖ Innovating solutions.
- ❖ Dexterity- Working with care and precision using tools & equipment.
- ❖ Control using CAD/ CAM and Micro bit.
- ❖ Planning a sequence of operations:
- ❖ Quality Control & Assurance Systems.
- ❖ Resilience:- Overcoming a problem using a wide range of strategies.

Skills Learnt:

KS4/5

- Developing knowledge and skills working with core materials: graphics, electronics, metals, textiles & plastics.
- Developing specialist knowledge in timbers-working characteristics and properties.
- Developing communication skills: drawing types, computer aided design, exam technique, technical vocabulary.
- Using technology: Laser cutting, 3D printing, CAM.
- Quality assurance systems; using Jigs, moulds, CAM.
- Developing numeracy: Area calculations, trigonometry; percentages; costings; ratios.
- Planning accurately through time plans.
- Health and safety: Using risk Assessments & legislation.
- Sustainability: Applying life cycle analysis, 5x R's.
- Problem solving- Developing solutions.

Year 9

Programming

CAD & 3D Printing. Teamwork to Innovate solutions

Planning

Sustainability and Presentation.

Timber

Joinery skills; Properties, Scales of Production, Health and Safety



Engineering

Using lathes; Casting, heat treatment and metal properties.

Specialist Knowledge

Woodworking tools & equipment. Care and accuracy to create a high quality timber product

Year 10



Metals

Working characteristics of ferrous and non ferrous metals to create a sustainable bird box.



CAD CAM

CAD software to create a 3D & laser printed USB light: Understanding working properties of thermo plastics



Theory Content

Examination questions, numeracy and exam technique is a focus over the 2 years

Year 11



Coursework

Producing a design folio for their individual project



Coursework

Planning, Manufacturing and testing their Prototype.



Year 12



Knowledge

Exam technique and core AS knowledge: Weekly focus



Skills focus

Making skills focus using wide range of materials and processes



Skills focus:

Developing communication skills-CAD, Drawing, Technical language focus.

Year 13



Coursework 80hrs

Producing a design folio for their individual project



Knowledge

Exam technique and core A2 knowledge: Weekly focus



Coursework

Planning, Manufacturing and testing their Prototype: