

Design & Technology Roadmap

Year 1

Circus Skills and Sun, Sea and Sand

Mechanisms and movement

Turrets and Talons and Earth Heroes

Creating plant pots from recycled materials

Gruesome Gladiators and Egyptians

Roman purses using stitching and joining techniques

Mechanical book using levers and sliders

Cutting and joining different materials to make a puppet

World at War and Crime and Punishment

Flag making using textile techniques

Purses and bags for a Novium gift shop

Explorers and Fire and Fury

Storing energy and prototype cars

Light and Transport

Electrical circuits and torch making

Costumes and Props – Designing, pinning and sewing with precision

Working with wood and mechanisms to build a guillotine

Rotary Mechanical systems and London Landmarks

Block Bot
Brief introduction to the design and process. Making a timber robot.
CK: Designing and making principles
SK: Timber based materials / components

Isometric drawing
Drawing and rendering a range of shapes.
CK: designing principles

Textiles for wellbeing
Designing products using textiles.
SK: Textile based materials

Year 7 overview
• **Baseline Project: Block Bot**
• **Trinket Box**
• **Isometric Drawing**
• **Aluminium Dog Tag**

Year 8

Year 8 Overview
• **Pewter Casting**
• **Cushion**
• **Orthographic Projection**

Year 9

Year 9 overview
• **1 NEA style project – Textiles**
• **1 focused practical task. Light Box**
• **Perspective drawing and technical presentation skills**

Orthographic Projection.
Introduction to orthographic
CK: designing principle

Cushion Design
and make fabric cushion, Exploring hand/ machine sewing.
CK: Textiles based materials

Pewter Casting
Design and make pendant – explore properties of pewter.
CK: Metal based materials

NEA mini project . Design and making skills through to realisation.
CK – paper & boards/ textiles/ timber/ polymer. Designing and making principles

Focused Practical task – Light box. Make piece of décor for the home.
SK natural timber.
Core knowledge: polymers/ electronics

Year 10

Year 10 overview
• **Selection of short FPT's** Tasks to cover core knowledge
• **1 mini NEA project**
• **YR11 NEA question** issued by AQA end of Yr10

FPT. Silver Ring. Introduction to non ferrous metals. Joining and shaping metals.
CK: metal based materials

Mini NEA. Laser Cut Mechanical Toy.
Designing and making principles.
Role of CAD CAM
SK: Timber based materials
CK: Mechanical systems/ production techniques

Perspective drawing.
Exploring the principles of 1pt and 2pt perspective
CK: designing principles

Year 11

Year 11 Overview
• **NEA Coursework**
• **Exam Preparation**

Short FPT's to embed theory. Categorisation of materials, joining and shaping materials.
CK: Polymers, Textiles, Paper and Board

Introduction to the NEA: AQA Design Challenges
Examination Practise: Mock Exam 1

NEA: Researching Ideas (Client, similar products and materials investigation)
Exam technique and revision processes (Mock Exam 2)
NEA: Defining the product (Brief and Specification)
NEA: Development One (Design and Development through modelling)

NEA: Designing to meet the client's needs (Developing a final design through modelling)
NEA: Prototyping (Constructing the final product)
NEA: Completion (Testing and Evaluation)

Exam preparation through focused practical tasks (timber based materials, metals, textiles, polymer and papers/card) **Revision** for the summer exam

Key
SK – Specialist knowledge
CK – Core knowledge
NEA – Non Examined Assessment
FPT – Focused practical task

