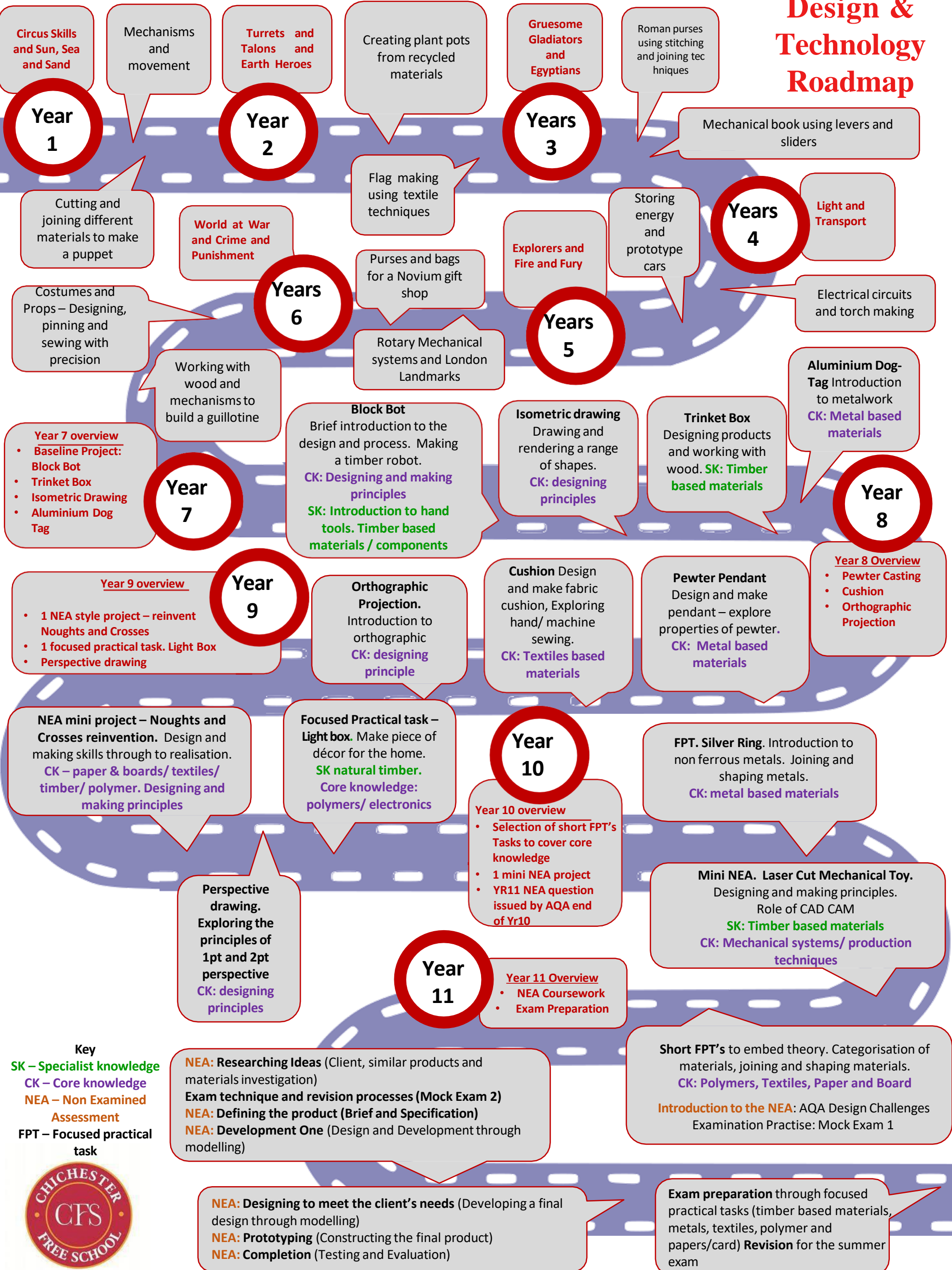


Design & Technology Roadmap



Year 1
Circus Skills and Sun, Sea and Sand

Mechanisms and movement

Year 2
Turrets and Talons and Earth Heroes

Creating plant pots from recycled materials

Years 3
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

Years 6
World at War and Crime and Punishment

Flag making using textile techniques

Years 5
Explorers and Fire and Fury

Storing energy and prototype cars

Years 4
Light and Transport

Costumes and Props – Designing, pinning and sewing with precision

Working with wood and mechanisms to build a guillotine

Purses and bags for a Novium gift shop

Years 7

Electrical circuits and torch making

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

Year 7

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

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

Trinket Box
Designing products and working with wood.
SK: Timber based materials

Aluminium Dog-Tag Introduction to metalwork
CK: Metal based materials

Year 8

Year 9 overview
• **1 NEA style project – reinvent Noughts and Crosses**
• **1 focused practical task. Light Box**
• **Perspective drawing**

Year 9

Orthographic Projection.
Introduction to orthographic
CK: designing principle

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

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

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

NEA mini project – Noughts and Crosses reinvention. 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

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

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**

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

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

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

