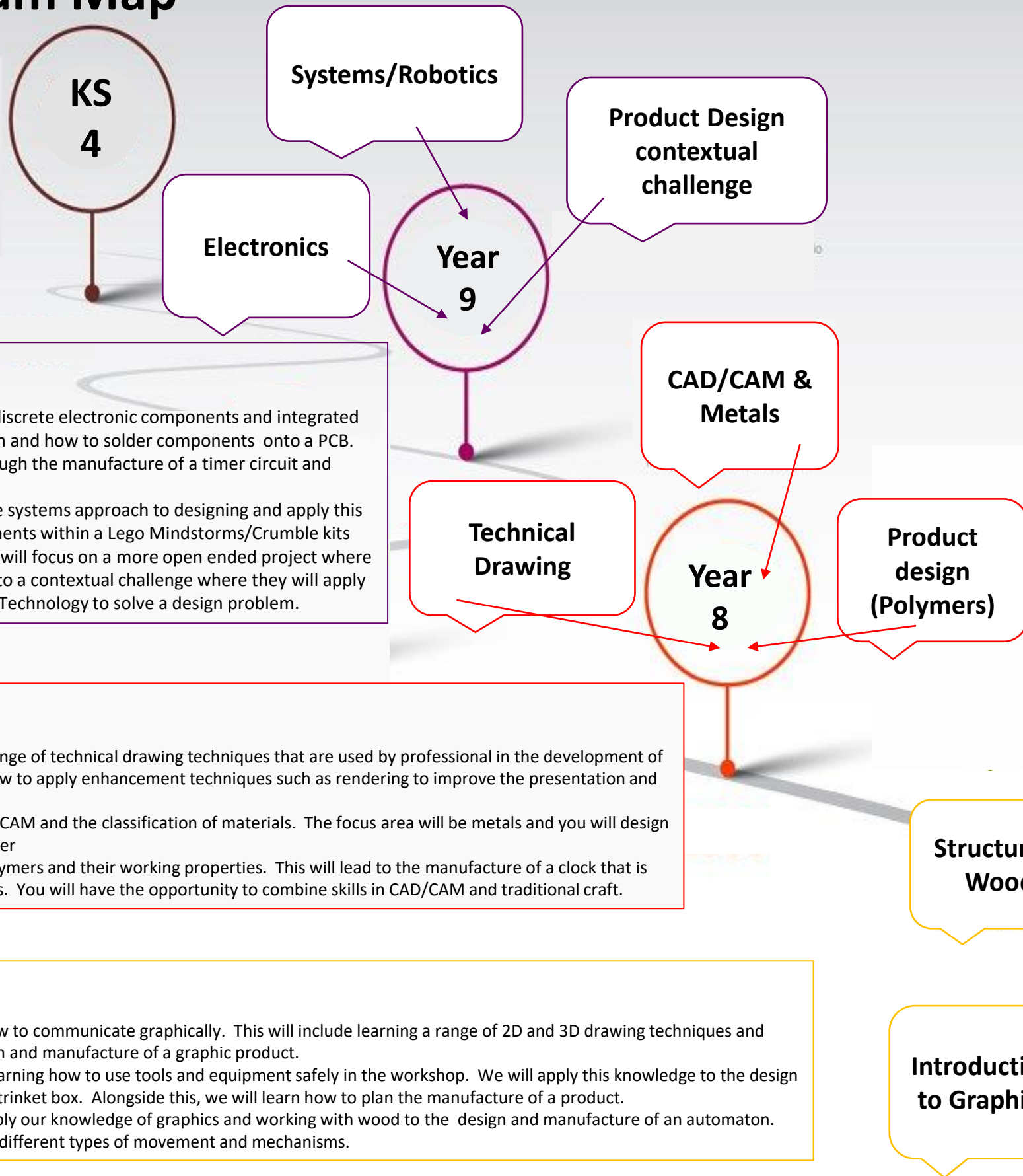


Design Technology

KS3 Curriculum Map

The road leads to
GCSE Design
Technology



Year 9

Autumn term – We will learn about discrete electronic components and integrated circuits. We will explore circuit design and how to solder components onto a PCB. We will consolidate this learning through the manufacture of a timer circuit and housing.

Spring term – We will learn about the systems approach to designing and apply this knowledge to programmable components within a Lego Mindstorms/Crumble kits

Summer term – The final term of KS3 will focus on a more open ended project where students will be required to respond to a contextual challenge where they will apply their combined knowledge of Design Technology to solve a design problem.

Year 8

Autumn term – We will be learning a range of technical drawing techniques that are used by professional in the development of products and services. We will learn how to apply enhancement techniques such as rendering to improve the presentation and appeal of our drawing

Spring term - We will learn about CAD/CAM and the classification of materials. The focus area will be metals and you will design and cast a piece of jewellery using pewter

Summer term – You will learn about polymers and their working properties. This will lead to the manufacture of a clock that is based on the works of famous designers. You will have the opportunity to combine skills in CAD/CAM and traditional craft.

Year 7

Autumn term – We will be learning how to communicate graphically. This will include learning a range of 2D and 3D drawing techniques and applying those techniques to the design and manufacture of a graphic product.

Spring term - In this unit, we will be learning how to use tools and equipment safely in the workshop. We will apply this knowledge to the design and manufacture of a wooden framed trinket box. Alongside this, we will learn how to plan the manufacture of a product.

Summer term - In this unit, we will apply our knowledge of graphics and working with wood to the design and manufacture of an automaton. As part of the unit, we will learn about different types of movement and mechanisms.

Aims

The national curriculum for **Design Technology**. Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.