YEAR 4	Autumn Term 1	Autumn Term 2	Spring Term 1	Spring Term 2	Summer Term 1	Summer Term 2
Key Question	What can we learn from ancient communities?		Is conflict ever justified?		Does the Earth look after us or do we look after the Earth?	
Areas of Study:	Textiles		Electrical and Mechanical Components & Construction		Food Technology	

KNOWLEDGE:

Designing	• Research as a matter of course before considering designing a product. • Use ideas from other people when designing e.g. creating a mood board of existing products • Confidently make labelled drawings from different views, showing specific features. • Produce a plan and explain the use of materials, equipment and processes • Persevere and adapt work when original ideas do not work • If the first attempt fails, identify strengths and future areas for development. • Communicate ideas through annotated sketches that show different viewpoints of the product • Begin to very familiar with different inventors, designers, engineers, chefs and manufacturers who have developed ground breaking products
Making	• Know which tools to use for a particular task and show knowledge of handling the tool accurately and safely. • Know which material is likely to give the best outcome based on its properties • Mark, measure and cut accurately a range of materials using appropriate tools, equipment and techniques. • Start to join and combine materials and components accurately in temporary and permanent ways. • Sew, weave or knit using a range of stitches • Show high levels of perseverance when things do not go as they would wish in the first instance. • Start to understand the mechanical and electrical systems have an input, process and output. • Know how mechanical systems (such as pulleys or gears) create movement. • Know how simple electrical circuit and components can be used to create functional products. • Understand how to reinforce and strengthen a 3d framework.

	• Begin to use finishing techniques to strengthen and improve their appearance of their product using a range of equipment, including ICT
Evaluating	• Evaluate and suggest improvements for designs • Evaluate products for both their purpose and appearance • Evaluate their own and others work • Evaluate their product, carrying out appropriate tests. • Evaluate their product both during and at the end of the assignment. • Present a product in an interesting way • Be able to disassemble and evaluate familiar products and consider the views of others to improve them
Technical Knowledge	• Link scientific knowledge by using lights, switches or buzzers • Use IT where appropriate to add to the quality of the product • Create a product that incorporates at least one lever
Food Technology	• Bring a creative element to the food product being designed • Know which season various foods are available for harvesting • Recognise safe practices in the kitchen and can identify hazards e.g. hazards when using an oven • Know how to use a range of techniques, such as peeling, chopping, slicing, gracing, mixing, spreading, kneading and baking. • know that to be active and healthy, food and drink are needed to provide energy for the body
KEY VOCABULARY	Texture, taste, appearance, preference, greasy, moist, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested
SKILLS:	
Developing, planning and communicating Ideas	• Can they create a final design for their product based on initial ideas and revisions based on existing ideas? • Can they create a detailed plan considering their target audience, design criteria and intended purpose?

Working with tools, equipment, materials and components to make quality products	• Can they use equipment and tools with increased accuracy and safely? • Can they select the most effective materials, tools and techniques to use? • Can they manipulate materials effectively using a range of tools and equipment? • Can they measure, cut and assemble accurately?
Evaluating processes and products	• Can they think about their ideas as they progress and make changes to improve their work? • Can they assess how well their product works in relation to the design criteria and intended purpose? • Can they explain how they could improve their design and how their improvements would affect the original outcome?
Areas of Study: <u>Textiles</u>	• Can they consider which materials are fit for purpose and join them appropriately? • Can they devise a template or pattern for their product? • Can they explore a range of textures using textiles? • Can they transfer a drawing into a textile design? • Can they use artist to influence their textile designs?
KEY VOCABULARY	Aesthetics, seam allowance, pinning, embroidery, back stitch, blanket stitch, cross stitch
Electrical and Mechanical Components	• Can they use a simple circuit and add components to it? • Can they make a product which uses both electrical and mechanical components?
Mechanisms: KEY VOCABULARY	Loose pivot, fixed pivot, system, input, process, output, linear, rotary, reciprocating, innovative, appealing, linkage, oscillating
Electrical Systems: KEY VOCABULARY	Series circuit, connection, push-to-make switch, push-to-break switch, innovative, appealing, control box, input device, output device, system
Construction	• Can they measure accurately to build effective structures? • Can they use a range of techniques to shape and mould? • Can they experiment with a range of techniques to increase stability in a structure? • Can they use finishing techniques, showing an awareness of audience? E.g., sanding, varnishing. glazing etc

KEY VOCABULARY	Assemble, prism, vertex, breadth, capacity, scoring, adhesives, reduce, reuse, recycle, corrugating, ribbing, laminating
GREATER DEPTH	• Can child offer creative response to the problem and think deeply and critically about other products and also about their own product? • Can child follow a design brief and actively and accurately consider the end user's needs and preferences throughout the process? • Does the child display high quality presentation and precision in their design and make?