

DESIGN TECHNOLOGY: DISCIPLINARY KNOWLEDGE

Year 4

Designing	<ul style="list-style-type: none">• 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 be familiar with different inventors, designers, engineers, chefs and manufacturers who have developed groundbreaking products.
Making	<ul style="list-style-type: none">• 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 that mechanical and electrical systems have an input, a process and an output.• Know how mechanical systems (such as pulleys or gears) enable movement.• Know how simple electrical circuits and components can enable the creation of functional products.• Understand how to reinforce and strengthen a 3D framework.• Begin to use finishing techniques to strengthen and improve the appearance of their product using a range of equipment, including ICT.

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Year 4 (continued)

Evaluating	<ul style="list-style-type: none">• Evaluate and suggest improvements to 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	<ul style="list-style-type: none">• 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.• Use appropriate sewing techniques.
Food Technology	<ul style="list-style-type: none">• 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. when using an oven.• Know how to use a range of techniques, such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.• Know that to be active and healthy, food and drink are needed to provide energy and hydration for the body.