

DESIGN TECHNOLOGY: DISCIPLINARY KNOWLEDGE

Year 4

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 be familiar with different inventors, designers, engineers, chefs and manufacturers who have developed groundbreaking 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 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.

DESIGN TECHNOLOGY: DISCIPLINARY KNOWLEDGE

Year 4 (continued)

Evaluating

- 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

- 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

- 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.