DESIGN TECHNOLOGY

Purpose of study

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.

Aims

The national curriculum for design and technology aims to ensure that all pupils:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- critique, evaluate and test their ideas and products and the work of others
- understand and apply the principles of nutrition and learn how to cook.

	Skills	Year 3	Year 4	Year 5	Year 6
D&T	**Cooking and nutrition**	Talk about each good group and name a food from each Understand that food can be farmed, grown or caught in Europe and the wider world Use a range of ingredients and techniques to prepare and combine ingredients safely **Resources: Kitchen equipment as per recipes requirements**	Understand a balanced diet Understand seasonality and locally produced food Read and follow recipes involving several processes, skills and techniques **Resources: Kitchen equipment as per recipes requirements**	Understand main food groups and different nutrients Understand how different food is reared, caught, grown and processed to make them safe/tasty Combine a range of ingredients through different techniques **Resources: Kitchen equipment as per recipes requirements**	Plan a series of healthy meals – varied diet. Use food labels to inform choices Research and plan a savoury dish. Apply technical skills when cooking **Resources: Kitchen equipment as per recipes requirements**
	Product design	Create cross sectional diagrams Use existing products to design own functional product Design using simple computer programmes **Resources: Sketch books; CAD software**	Product design using cross sectional diagrams Designing for a purpose **Resources: Sketch books**	" " Make prototypes Use market research to inform own designs Produce step by step plans **Resources: Sketch books; variety of materials; cardboard; wood; saws**	" " Computer aided design programmes **Resources: Sketch books; variety of materials;**

					cardboard; wood; saws; CAD software
	Making	Strengthen frames using directional cuts – cardboard or wood Create levers and understand how they create movement Safely cut out and assemble products **Resources: Wood, saws, wood glue, cardboard, scissors, elastic bands, wood sticks,**	Use electrical systems in products – link to Science Cut, shape, join and finish work – wood work. Strengthen structures **Resources: Wood, saws, wood glue, small nails, hammers, wire, batteries**	Use precise measurements – joins, holes and openings in the right places Build 3D structures – mechanical and electrical systems **Resources: Wood, saws, wood glue, small nails, hammers**	Reinforce complex structures Monitor and control a product **Resources: Wood, saws, wood glue, small nails, hammers, wire, batteries' programming software**
	Evaluating	Analyse existing products	Consider existing products and how they might be improved/meet needs of a user	Consider the views of others when improving own work	