Design Technology

Progression of knowledge and Skills

Cooking and Nutrition	
Year 1	Talk about what they eat at home and begin to discuss what a healthy foods are Say where some food comes from and give examples of food that is grown Use simple tools with help to prepare food safely
Year 2	Understand the need for a variety of food in a diet Understand that all food has to be farmed, grown or caught Use a wider range of cookery techniques to prepare food safely
Year 3	Talk about the different food groups and name food from each group Understand that food has to be grown, farmed or caught in Europe and the wider world Use a wider variety of ingredients and techniques to prepare and combine ingredients safely
Year 4	Understand what makes a healthy and balanced diet, and that different foods and drinks provide different substances the body needs to be healthy and active Understand seasonality and the advantages of eating seasonal and locally produced food Read and follow recipes which involve several processes, skills and techniques
Year 5	Understand the main food groups and the different nutrients that are important for health Understand how a variety of ingredients are grown, reared, caught and processed to make them safe and palatable/ tasty to eat Select appropriate ingredients and use a wide range of techniques to combine them
Year 6	Confidently plan and prepare and cook a savoury dish applying their knowledge of ingredients and their technical skills

Processes	
Year 1	Create simple designs for a product Use pictures and words to describe what they want to do Select from and use a range of tools and equipment to perform practical tasks e.g. cutting, shaping, joining and finishing Use a range of simple tools to combine materials and components safely Ask simple questions about existing products and those that they have made Build structures, exploring how they can be made stronger, stiffer and more stable Use wheels and axles in a product
Year 2	Design purposeful, functional, appealing products for themselves and other users based on design criteria Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology Choose appropriate tools, equipment, techniques and materials from a wide range Safely measure, mark out, cut and shape materials and components using a range of tools Evaluate and assess existing products and those that they have made using a design criteria Investigate different techniques for stiffening a variety of materials and explore different methods of enabling structures to remain stable Explore and use mechanisms e.g. levers, sliders, wheels and axles, in their products

Year 3	Use knowledge of existing products to design their own functional product Create designs using annotated sketches, cross-sectional diagrams and simple computer programs Safely measure, mark out, cut, assemble and join with some accuracy Make suitable choices from a wider range of tools and unfamiliar materials and plan out the main stages of using them Investigate and analyse existing products and those they have made, considering a wide range of factors Strengthen frames using diagonal struts Evaluate theirs, and others, work Understand how mechanical systems such as levers and linkages or pneumatic systems create movement

Year 4	Use knowledge of existing products to design a functional and appealing product for a particular purpose and audience Create designs using exploded diagrams Use techniques which require more accuracy to cut, shape, join and finish their work e.g. Cutting internal shapes, slots in frameworks Use their knowledge of techniques and the functional and aesthetic qualities of a wide range of materials to plan how to use them Consider how existing products and their own finished products might be improved and how well they meet the needs of the intended user Apply techniques they have learnt to strengthen structures and explore their own ideas Evaluate theirs, and others, work Understand and use electrical systems in products
Year 5	Create prototypes to show their ideas Make careful and precise measurements so that joins, holes and openings are in exactly the right place Produce step by step plans to guide making their making, demonstrating they can apply their subject knowledge of different materials, tools and techniques Make detailed evaluations about existing products and their own considering the views of others to improve their work Build more complex 3D structures and apply their knowledge of strengthening techniques to make them stronger or more stable Evaluate theirs, and others, work Understand how to use more complex mechanical and electrical systems
Year 6	Generate develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams prototypes, pattern pieces and computer-aided design Apply their knowledge of materials and techniques to refine and rework their product to improve its functional properties and aesthetic qualities Use technical knowledge and accurate skills to problem solve during the making process Use their knowledge of famous designs to further explain the effectiveness of existing products and products they have made Use a wide range of methods to strengthen, stiffen and reinforce complex structures and can use them accurately and appropriately Evaluate theirs, and others, work Apply their understanding of computing to program, monitor and control their product