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| **Design and Technology** | **Year 1** | **Year 2** | **Year 3** | **Year 4** | **Year 5** | **Year 6** |
| **Cooking** | - Use simple tools with help to prepare food safely | - Use a wider range of cookery techniques to prepare food safely | - Use a wider variety of ingredients and techniques to prepare and combine ingredients safely | - Read and follow recipes which involve several processes, skills and techniques | - Select appropriate ingredients and use a wide range of techniques to combine them | - Research, plan and prepare and cook a savoury dish, applying his/her knowledge of ingredients and his/her technical skills |
| **Nutrition** | - Apply his/her understanding of computing to program, monitor and control his/her product- Say where some food comes from and give examples of food that is grown | - Understand the need for a variety of food in a diet- Understand that all food has to be farmed, grown or caught | - 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 | - 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 | - 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 | - Confidently plan a series of healthy meals based on the principles of a healthy and varied diet- Use information on food labels to inform choices |
| **Design and Communication** | - Create simple designs for a product- Use pictures and words to describe what he/she wants to do- Select from and use a range of tools and equipment to perform practical tasks e.g. cutting, shaping, joining and finishing | - Design purposeful, functional, appealing products for himself/herself and other users based on design criteria- Generate, develop, model and communicate his/her ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology | - Use knowledge of existing products to design his/her own functional product- Create designs using annotated sketches, cross-sectional diagrams and simple computer programmes | - Use knowledge of existing products to design a functional and appealing product for a particular purpose and audience- Create designs using exploded diagrams | - Use his/her research into existing products and his/her market research to inform the design of his/her own innovative product- Create prototypes to show his/her ideas | - Use research he/she has done into famous designers and inventors to inform the design of his/her own innovative products- Generate, develop, model and communicate his/her ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design |
| **Using Tools and Materials** | - Use a range of simple tools to cut, join and combine materials and components safely | - 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 | - 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 | - Use techniques which require more accuracy to cut, shape, join and finish his/her work e.g. Cutting internal shapes, slots in frameworks- Use his/her knowledge of techniques and the functional and aesthetic qualities of a wide range of materials to plan how to use them | - Make careful and precise measurements so that joins, holes and openings are in exactly the right place- Produce step by step plans to guide his/her making, demonstrating that he/she can apply his/her knowledge of different materials, tools and techniques | - Apply his/her knowledge of materials and techniques to refine and rework his/her product to improve its functional properties and aesthetic qualities- Use technical knowledge accurate skills to problem solve during the making process |
| **Evaluating** | - Ask simple questions about existing products and those that he/she has made | - Evaluate and assess existing products and those that he/she has made using a design criteria | - Investigate and analyse existing products and those he/she has made, considering a wide range of factors | - Consider how existing products and his/her own finished products might be improved and how well they meet the needs of the intended user | - Make detailed evaluations about existing products and his/her own considering the views of others to improve his/her work | - Use his/her knowledge of famous designs to further explain the effectiveness of existing products and products he/she have made |
| **Mechanics and Engineering** | - Build structures, exploring how they can be made stronger, stiffer and more stable- Use wheels and axles in a product | - 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 his/her products | - Strengthen frames using diagonal struts- Understand how mechanical systems such as levers and linkages or pneumatic systems create movement | - Apply techniques he/she has learnt to strengthen structures and explore his/her own ideas | - Build more complex 3D structures and apply his/her knowledge of strengthening techniques to make them stronger or more stable | - Use a wide range of methods to strengthen, stiffen and reinforce complex structures and can use them accurately and appropriately |
| **Electronics** |  |  |  | - Understand and use electrical systems in products | - Understand how to use more complex mechanical and electrical systems | - Apply his/her understanding of computing to program, monitor and control his/her product |