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|  | **Bannerman**  **(Years 1 and 2)** | **Porteous**  **(Years 3 and 4)** | **Borton**  **(Years 5 and 6)** |
| **Design** | Begin to understand the development of existing products: What they are for, how they work, materials used.  Start to generate ideas by drawing on their own and other people's experiences.  Begin to develop their design ideas through discussion, observation, drawing and modelling.  Identify a purpose for what they intend to design and make.    Understand how to identify a target group for what they intend to design and make based on a design criteria.  Develop their ideas through talk, drawings and label parts.  Make templates and mock ups of their ideas in card and paper or using ICT. | Understand the development of existing products: What they are used for, how they work, materials used and audience.  Begin to create design criteria based on intended purpose and audience.  Start to generate ideas, considering the purposes and audience for which they are designing.  Make labelled drawings from different views showing specific features.  Begin to plan the order of their work, choosing appropriate materials, tools and techniques.  Begin to consider alternative methods of making if the first attempts fail.  Identify the strengths and areas for development in their ideas and products.  When planning consider the views of others, including intended users, to improve their work.  When planning explain their choice of materials and components according to function and aesthetic.  Learn about inventors, designers, engineers, chefs and manufacturers who have developed  ground-breaking products. | Research and understand the development of existing products: What they are used for, how they work, materials used and audience.  Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose.  Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes and pattern pieces.  Apply a range of finishing techniques, including those from art and design.  Draw up a specification for their design.  Plan the order of their work, choosing appropriate materials, tools and techniques.  Suggest alternative methods of making if the first attempts fail.  Use results of investigations, information sources, including ICT when developing design ideas.  Learn about inventors, designers, engineers, chefs and manufacturers who have developed  ground-breaking products. |
| **Make** | Begin to select tools and materials; use correct vocabulary to name and describe them.  Build structures, exploring how they can be made stronger, stiffer and more stable.  With help measure, cut and score with some accuracy.  Learn to use hand tools safely and appropriately.  Start to assemble, join and combine materials in order to make a product.  Demonstrate how to cut, shape and join fabric to make a simple product.  Use basic sewing techniques.  Start to choose and use appropriate finishing techniques based on own ideas. | Select a wider range of tools and techniques for making their product safely.  Select from and use a range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.  Measure, mark out, cut, score and assemble components with increasing accuracy.  Start to join and combine materials and components with increasing accuracy in temporary and permanent ways.  Begin to understand how to reinforce and strengthen a 3D framework.  Sew using a range of different stitches.  Start to measure, tape or pin, cut and join fabric with some accuracy.  Begin to consider and make modifications as they go along to improve design and product.  Begin to use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT. | Select appropriate tools and techniques e.g. cutting, shaping, joining and finishing, accurately.  Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.  Measure, mark out, cut, score and assemble components accurately.  Join and combine materials and components with accuracy to ensure a good-quality finish to the product.  Construct products using permanent joining techniques.  Understand how to reinforce and strengthen a 3D framework.  Pin, sew and stitch materials together to create a product.  Make modifications as they go along to improve design and product.  Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT. |
| **Evaluate** | Evaluate their work against the design criteria.  Identify how they could improve their design.  Look at a range of existing products explain what they like and dislike about products and why.  Start to evaluate their products as they are developed, identifying strengths and possible changes they might make.  With confidence talk about their ideas, saying what they like and dislike about them. | Evaluate their products against the design criteria, intended purpose and audience, carrying out appropriate tests.  Explain how they could improve their design.  Start to evaluate and refine their work throughout the process of designing, making and the finished product.  Begin to be able to disassemble and evaluate familiar products and consider the views of others to improve them.  Evaluate the key designs of individuals in design and technology that have helped shape the world. | Evaluate their products against the design criteria, intended purpose and audience, identifying strengths and areas for development, and carrying out appropriate tests.  Evaluate and refine their work throughout the process of designing, making and the finished product.  Be able to disassemble and evaluate familiar products and consider the views of others to improve them.  Evaluate the key designs of individuals in design and technology that have helped shape the world. |
| **Technical Knowledge** | Explore materials and their properties to strengthen, stiffen or reinforce products.  Build structures, exploring how they can be made stronger, stiffer and more stable  Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. | Develop understanding of how to strengthen, stiffen and reinforce structures.  Start to understand that mechanical systems such as levers and linkages or pneumatic systems create movement.  Understand how simple electrical circuits and components can be used to create functional products.  Begin to learn how to use computing to program and control their products. | Use understanding of how to strengthen, stiffen and reinforce more complex structures.  Understand and use mechanical systems such as gears, pulleys, cams, levers and linkages to create movement.  Understand and use simple electrical circuits that include switches, bulbs, buzzers or motors in their products  Learn how to use computing to program and control their products. |
| **Cooking and Nutrition** | Understand that all food comes from plants or animals.  Know that food has to be farmed, grown elsewhere (e.g. home) or caught.  Understand how to name and sort foods into the five groups in ‘The Eat Well Plate’.  Know that everyone should eat at least five portions of fruit and vegetables every day.  Demonstrate how to prepare simple dishes safely and hygienically, without using a heat source.  Demonstrate how to use techniques such as cutting, peeling and grating. | Understand that food is grown, reared and caught in the UK, Europe and the wider world.  Begin to understand that seasons may affect the food available.  Begin to understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.  Begin to understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.  Begin to understand that a healthy diet is made up from a variety and balance of different food and drink, as depicted in ‘The Eat Well Plate’.  Understand that to be active and healthy, food and drink are needed to provide energy for the body. | Understand that food is grown, reared and caught in the UK, Europe and the wider world  Understand that seasons may affect the food available.  Understand how food is processed into ingredients that can be eaten or used in cooking.  Understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.  Understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.  Understand that a healthy diet is made up from a variety and balance of different food and drink, as depicted in ‘The Eat Well Plate’.  Understand different food and drink contain different substances – nutrients, water and fibre – that  are needed for health. |