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| **College Town Primary School - DT Yearly Overview** |
|  | **Autumn 1** | **Autumn 2** | **Spring 1** | **Spring 2** | **Summer 1** | **Summer 2** |
| **Year 1** |  | **Create a Moving Picture**Create simple designs for a productUse pictures and words to describe what he/she wants to doMake structures by joining simple objects togetherUse a range of simple tools to cut, join and combine materials and components safelyBuild structures, exploring how they can be made stronger, stiffer and more stableUse wheels and axles in a product |  | **Design London Bridge**Explain what he/she likes about the work of othersUse pictures and words to describe what he/she wants to doSelect from and use a range of tools and equipment to perform practical tasks e.g. cutting, shaping, joining and finishing.Create simple designs for a productAsk simple questions about existing products and those that he/she has made | **Make a Fruit Salad**Talk about what he/she eats at home and begin to discuss what healthy foods areSay where some food comes from and give examples of food that is grownUse simple tools with help to prepare food safely |  |
| **Year 2** | **Design a mode of Transport**Design purposeful, functional, appealing products for himself/herself and other users based on design criteriaGenerate, develop, model and communicate his/her ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technologyChoose appropriate tools, equipment, techniques and materials from a wide rangeSafely measure, mark out, cut and shape materials and components using a range of toolsEvaluate and assess existing products and those that he/she has made using a design criteria. |  | **Make A Castle**Design purposeful, functional, appealing products for himself/herself and other users based on design criteriaGenerate, develop, model and communicate his/her ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technologyChoose appropriate tools, equipment, techniques and materials from a wide rangeInvestigate 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 |  | **Design a fruit smoothie**Understand the need for a variety of food in a dietUnderstand that all food has to be farmed, grown or caughtUse a wider range of cookery techniques to prepare food safely |  |
| **Year 3** | **Greek Food**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. |  |   | **British Inventors**Use knowledge of existing products to design his/her own functional product.Create designs using annotated sketches, cross-sectional diagrams and simple computer programmes.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 he/she has made, considering a wide range of factors.Strengthen frames using diagonal struts.Understand how mechanical systems such as levers and linkages or pneumatic systems create movement. |  | **Building a 3D Landscape**Use knowledge of existing products to design his/her own functional product.Create designs using annotated sketches, cross-sectional diagrams and simple computer programmes.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 he/she has made, considering a wide range of factors.Strengthen frames using diagonal struts.Understand how mechanical systems such as levers and linkages or pneumatic systems create movement. |
| Year 4 | **Light up Lighthouses** 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 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.Consider how existing products and his/her own finished products might be improved and how well they meet the needs of the intended user.Apply techniques he/she has learnt to strengthen structures and explore his/her own ideas.Understand and use electrical systems in products. |  |  | **Create a Bug Hotel**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 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.Consider how existing products and his/her own finished products might be improved and how well they meet the needs of the intended user.Apply techniques he/she has learnt to strengthen structures and explore his/her own ideas. |  | **Growing own vegetable patch** 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** |  | **Making food from North America (Burgers)**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. |  |  | **Mayan Temples** 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.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.Make detailed evaluations about existing products and his/her own considering the views of others to improve his/her work.Build more complex 3D structures and apply his/her knowledge of strengthening techniques to make them stronger or more stable. | **Building a bridge for a purpose** 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.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.Make detailed evaluations about existing products and his/her own considering the views of others to improve his/her work.Build more complex 3D structures and apply his/her knowledge of strengthening techniques to make them stronger or more stable. |
| **Year 6** |  | **Light up boxes** 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.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.Use his/her knowledge of famous designs to further explain the effectiveness of existing products and products he/she have made.Use a wide range of methods to strengthen, stiffen and reinforce complex structures and can use them accurately and appropriately. |  | **Great British Dishes**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.Research, plan and prepare and cook a savoury dish, applying his/her knowledge of ingredients and his/her technical skills. |  |   |