Design technology

	Nursery	Reception	Rec/Year 1	Year1/2	Year 2	End of Key Stage Expectations
Design			- Use own ideas. - Use pictures and labels/words to plan. - Design following a set criteria.	- Think of own ideas. - Explain what attempting to achieve. -Describe design through pictures, model mock-ups and labels/words. -Design a product for self and others following a design criteria.	- Think of ideas and plan next steps. - Choose the best tools and materials, and explain why. - Describe design by using pictures, diagrams, model mock-ups, labels/words and ICT. - Design a product for others following a design criteria.	- Design purposeful, functional, appealing products for themselves and other users based on design criteria. - Generate, develop, model and communicate ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.
Make	- Use various construction materials. - Beginning to construct, stacking blocks vertically and horizontally, making enclosures and creating spaces. - Joins construction pieces together to build and balance. - Realises tools can be used for a purpose	- Use various construction materials. - Beginning to construct, stacking blocks vertically and horizontally, making enclosures and creating spaces. - Joins construction pieces together to build and balance. - Realises tools can be used for a purpose a variety of materials, tools and techniques. - They represent their own ideas, thoughts and feelings through design and technology.	-Explain what they are making. -Select tools and equipment to cut, shape, join and finish. -Attempt to choose correct materials.	- Explain what they are making and why. - Select tools and equipment to cut, shape, join and finish. - Describe tools which are being used and the reason for using them. -Select materials and explain reason for selection.	- Explain what they are making and why it is suitable for the audience. - Join materials/components together in different ways. - Select materials and explain reason for selection based on their characteristics.	- Select from and use a range of tools and equipment to perform practical tasks such as cutting, shaping, joining and finishing. - Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.
Evaluate			- Talk about own work. - Discuss existing products strengths and weaknesses.	- Describe how existing products work. - Link own work to what has been asked through instruction or design criteria. - Discuss own and others work,	- Comment on strengths of work. - Comment on what weaknesses/changes would be made. - Assess against design criteria.	- To explore and evaluate a range of existing products. - Evaluate ideas and products against design criteria.
Technical Knowledge			Construction - Say how to make products stronger. - Use levers or slides in my work. Cooking & Nutrition - Cut food safely. - Describe the texture of food. - Wash hands and keep surfaces clean. - Propose interesting ways of decorating food. - Discuss healthy foods. - Discuss food sources.	Use of materials - Measure materials to use in a model. - Join materials in different ways. - Use joining, folding or rolling to make stronger. - Use of levers or slides. Cooking & Nutrition - Describe properties of ingredients and suggest importance of a varied diet. - Explain what hygienic is and demonstrate. - Identify food sources.	Mechanisms - Join materials as part of a moving product. - Add a specific design to a product. - Use axels and wheels. Textiles - Measure textiles. - Join textiles. - Cut textiles. - Explain reason for textiles selection.	Technical knowledge - Build structures, exploring how they can become stronger, stiffer and more stable. - Explore and use mechanisms, such as levers, sliders, wheels and axels in products. Cooking & Nutrition - Use the basic principles of a healthy and varied diet to prepare dishes. - Understand where food comes from.

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	Year 3	Year 3/4	Year 4/5	Year 5/6	Year 6	End of Key Stage expectations

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Design	- Designs meet a range of requirements. - Plan to show the order of the make and the equipment and tools needed. - Describe design using accurately labelled sketch.	- Designs meet a range of requirements. - Step-by-step plan to show the order of the make and the equipment and tools needed. - Describe design using accurately labelled sketch. - Comment on how realistic the plan is. - Take account ideas of others in design process.	- Suggest at minimum of one idea about how to create a product. - Take account of others ideas when designing. - Produce a plan and explain to other. - Suggest improvements and discuss strengths and weaknesses of original design.	- Suggest a range of ideas after collecting product information. - Take a user's view into account when designing. - Create a detailed step-by-step plan. - Suggest an alternative plan and comment on the strengths and weaknesses. - Use cross sectional planning to show designs. - Produce prototypes to demonstrate ideas.	- Use a range of information to inform designs. - Incorporate market research to inform plans. - Work within constraints when designing. - Follow and refine plans when necessary. - Justify plan to others. - Consider culture and society in design ideas. - Use diagrams to show designs. - Use computer aided designs to demonstrate ideas.	- Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. - Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.
Make	- Use equipment and tools accurately. - Pause periodically to anticipate finished design.	- Use equipment and tools accurately. - Pause periodically to anticipate design quality and make adaptions.	- Conscious of the need for the design to be liked by others. - Show a good level of expertise when using a range of tools and equipment. - Explain how the product will appeal to the audience.	- Explain why the finished product will be of good quality. - Explain how the product will appeal to the audience. - Use a range of tools and equipment expertly. - Consider the aesthetic qualities of produced work. - Consider the functionality of my work.	- Use tools and materials precisely. - Adapt the way of working, if necessary. - Consider the aesthetic qualities of produced work. - Consider the functionality of my work.	- Select from and use a wider range of tools and equipment to perform practical tasks, such as 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.

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| Evaluate | - Suggest points to change to enhance design.

- Evaluate existing products. | - Consider ways to test if design is successful.

- Suggest ways of improving existing design.

- Evaluate existing products. | - Explain ways of improving existing design.

- Evaluate product, thinking of appearance and functionality.

- Evaluate existing products against set criteria. | - Pause periodically to ensure design is the best it can be.

- Test to suggest and conduct improvements.

- Evaluate appearance and functionality against original design.

- Test and evaluate the final product.

- Comment if the product is fit for purpose.

- Evaluate existing products against criteria which the individual has set. | - Test and evaluate the final product.

- Comment if the product is fit for purpose.

- Suggest improvements.

- Evaluate if the use of different resources would have improved the product.

- Comment on if different or further research/ information gathered could have improved the product.

- Evaluate existing products against criteria which the individual has set. | - Investigate and analyse a range of existing products.

- Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.

- Understand how key events and individuals in design and technology have helped shape the world. |

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Technical Knowledge					
Textiles - Join textiles in different ways. - Choose textiles for both appearance and qualities. Cooking & Nutrition - Choose the right ingredients for a product. - Use equipment safely. - Ensure the product looks attractive. - Described how combined ingredients come together. - Grow plants and herbs from seeds with the intention of using them as ingredients. Materials - Use the most appropriate materials. - Work accurately to make cuts and holes. - Join materials.	Textiles - Consider the end users requirements when selecting textiles. - Consider how to strength products. - Devise a template. - Explain how to join things in a different way. Cooking & Nutrition - Explain how to be hygienic and safe. - Consider how to present products in interesting ways. Electrical & Mechanical components - Select the most appropriate tools and techniques to use for a given task. - Make a product which uses both electrical and mechanical components. - Use a simple circuit. - Use a number of components. - Add things to circuits. - How has the product been altered? - Confidence trying new and different ideas.	Stiff and flexible sheet materials - Measure carefully so as to ensure no mistakes of occurred. -Attempt to make products strong. Cooking and nutrition - Describe how to be both hygienic and safe. -Present products well. Mouldable materials - Take time to consider how the design could be improved. - Improve product despite original idea failing.	Electrical & mechanical components - Incorporate a switch into the products. - Refine products after testing it. - Incorporate hydraulics and pneumatics. - Use different kinds of circuits in products. - Consider ways in which adding a circuit would improve the product. Mouldable materials - Consider the use of the product when selecting materials. - Explain how the product meets all design criteria. Stiff and flexible sheet materials - Measure accurately to ensure that everything is precise. - Ensure that the product is strong and fit for purpose.	Textiles - Consider what the user would want when choosing textiles. -Make the product attractive and strong. - Make up a prototype first. - Use a range of joining techniques. - Think about how the product could be sold. - Give considered thought about what would improve the product further. Electrical and mechanical components - Use different kinds of circuit in products. - Think of ways in which adding a circuit would improve products. Mouldable materials - Consider the use of the product when selecting materials. - Explain how products meet all design criteria.	Textiles - Apply understanding of how to strengthen, stiffen and reinforce more complex structures. - Understand and use mechanical systems in products, such as gears, pulleys, cams, levers and linkages. - Understand and use electrical systems in products, such as series circuits incorporating switches, bulbs, buzzers and motors. - Apply understanding of computing to programme, monitor and control products. Cooking and Nutrition - Understand and apply the principles of a healthy and varied diet. - Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. - Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

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