St Cuthbert's Primary School – Design and Technology Progression of Skills and Objectives

	EYFS	Ks1		Lower KS2		Upper KS2	
		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design Process	-Discuss what a product does or needs to do - Explore the qualities of a range of materials - Make to create an outcome. - Explain why they chose their materials. - Explain what they have made.	- Work from a basic brief to generate ideas and design a simple product. - Explore suitability of common materials before making a choice. - Show awareness of some products similar to their design. - Make a simple mock-up. - Make a final product. - Evaluate their final product – what went well? Did they follow the brief?	- Work from a basic brief to generate ideas and design a simple product fit for purpose and audience. - Develop ideas, communicating and recording them in a suitable way (e.g. design book, design page, IT, mind map) - Make a simple mock-up. - Make a final product. - Evaluate their final product – what went well? Did they follow the brief?	- Work from a brief to design an appealing, functional product fit for purpose and audience. - Explore some possible materials, conducting a simple test to ensure suitability before making a choice. - Show awareness of products similar to their own. - Develop an idea, communicating and recording it in a suitable way (e.g. annotated design page, diagrams, IT) - Create a final idea and translate this into a final product which fits the brief. - Evaluate their final product – what went well? Did they follow the brief? How could they improve their design?	- Work from a brief to design an appealing, functional product fit for purpose and audience. - Perform basic tests, make simple prototypes/pattern pieces as appropriate. - Develop an idea, communicating and recording it in a suitable way (e.g. annotated design page, diagrams, IT) - Create a final idea and translate this into a final product which fits the brief. - Evaluate their final product – what went well? Did they follow the brief? How could they improve their design?	-Work from a brief with a simple constraint (e.g. audience / purpose) to design an appealing, functional product. -Research a range of materials, conducting tests as appropriate before selecting the best choice. -Research products similar and different to their own to inform their own design. -Develop a design idea, communicating and recording it via a plan -Test ideas using prototypes/creating pattern pieces .-Develop and make a final product, based on testing, which meets the brief criteria. -Evaluate their final product, including discussion amongst peers to assess their product against the brief and consider improvements.	-Work from a brief with a simple constraint (e.g. audience / purpose) to design an appealing, functional product. -Research a range of materials, conducting tests as appropriate before selecting the best choice. -Research products similar and different to their own to inform their own design. -Develop a design idea, communicating and recording it via a plan and a labelled diagram. -Test ideas using prototypes/creating pattern pieces and where relevant computer aided design. -Evaluate their final product, including discussion amongst peers to assess their product against the brief and consider improvements
Resistant Materials	- Begin to cut and tear materials. - Stick and glue materials together. - Use junk objects to create their own designs. - Begin to consider how they join materials together.	- Follow basic procedures for safety. - Cut materials safely using scissors. - Tear, fold and curl materials. - Join using gluing and taping. - Select materials and tools based on their properties. - Build structures, exploring how they can be made stronger, stiffer and more stable.	- Follow basic procedures for safety. - Cut materials safely using scissors. - Tear, fold and curl materials. - Join using gluing and taping. - Begin to use a simple hinge. - Create products based on a design. - Select materials and tools based on their properties. - Explore and use simple mechanisms [e.g. levers, sliders, wheels and axles], in their products.	- Follow procedures for safety. - Cut, tear and shape materials. - Use a wider range of joining methods (e.g. fasteners, tabs, flange) - Choose appropriate materials and tools for a product based on their functional properties. - Strengthen, stiffen and reinforce a product using suitable materials. - Choose appropriate materials by testing their properties using a prototype.	- Follow procedures for safety. - Cut, tear and shape materials with increasing accuracy. - Use a wider range of joining methods (e.g. fasteners, tabs, flange) - Choose appropriate materials and tools for a product based on their functional properties and aesthetics. - Strengthen, stiffen and reinforce a product using suitable materials. - Make mechanical /moving elements (e.g. pulleys, levers and linkages)	- Follow procedures for safety with a wider range of tools and processes. - Cut and shape materials based on their design. - Choose appropriate tools and methods to cut and form a wider range of materials. - Choose appropriate materials by testing their properties using prototypes. - Make mechanical /moving elements (e.g. gears, cams and pneumatics) - Use a wider range of joining methods (e.g. inserts, wrap, gusset, notch)	- Follow procedures for safety with a wider range of tools and processes. - Cut and shape materials based on their design with increasing accuracy. - Choose appropriate tools and methods to cut and form a wider range of materials. - Choose appropriate materials by testing their properties using prototypes, justifying their choices. - Make mechanical /moving elements (e.g. gears, cams and pneumatics) - Use a wider range of joining methods (e.g. inserts, wrap, gusset, notch)

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					- Choose appropriate materials by testing their properties using a prototype. - Incorporate a simple electrical system into their product.	- Use computing to program, monitor and control their products.*	- Incorporate a more complex electrical system into their designs (e.g. more than one component / adding a switch). - Use computing to program, monitor and control their products.*
Textiles	- Stick and decorate textiles with support. - Thread beads onto a string. - Begin to cut fabric using scissors.	- Cut textiles using scissors - Decorate textiles using crayons, paint or sticking. - Join textiles using glue. - Create simple weaving using paper.	- Cut textiles using scissors and a template. - Decorate textiles using crayons, paint or sticking. - Join textiles using glue. - Use a running stitch to join textiles using pre-prepared holes. - Create simple weaving using paper or large strips of fabric.	- Cut textiles with scissors safely. - Thread a needle and tie a knot. (e.g. wool/embroidery needle) - Use a running stitch to join textiles. - Decorate textiles using stamping, printing -Weave using a cardboard loom.	- Cut textiles with scissors safely. - Thread a needle and tie a knot. (e.g. wool/embroidery needle) - Use a running stitch to join textiles. - Decorate textiles using stamping, printing and simple embellishment. - Weave using a cardboard loom.	- Use seam allowance and back stitch to join textiles to create a simple product (e.g. A cushion or soft toy). - Use a pattern/template to mark and cut fabric into a specific shape - Use cross stitch and running stitch. - Thread a needle and tie a knot, including finishing a thread and starting a new one within a project. - Choose appropriate materials for a textile product based on its use. - Sew a button or bead onto a project.	- Use seam allowance and back stitch to join textiles to create a simple product (e.g. A cushion or soft toy). - Use a pattern/template to mark and cut fabric into a specific shape - Use filling stitch. - Use applique - Thread a needle and tie a knot, including finishing a thread and starting a new one within a project. - Choose appropriate materials for a textile product based on its use. - Weave using a variety of materials.
Food and Nutrition *statements link to Science	- Mix pre-prepared ingredients with the support of an adult, safely and hygienically - Use a blunt knife to spread butter or jam (or alternative) on a cracker or bread. - Understand that fruit and vegetables grow, and which ones are grown in the UK.	- Cut soft foods safely and hygienically using an appropriate tool. - Measure using measuring cups and spoons. - Assemble ingredients to make a simple recipe. - Discuss what a healthy and varied diet should look like - Know where a range of fruits and vegetables come from. *	- Cut soft foods safely and hygienically using an appropriate tool. - Measure using measuring cups and spoons. - Assemble ingredients to make a simple recipe. - Discuss what a healthy and varied diet should look like, naming and sorting using the five main groups. * - Know where a range of fruits and vegetables come from. *	- Cut a range of foods safely and hygienically with an appropriate tool. - Measure ingredients using scales or jugs. (appropriate mathematical level) - Follow recipes, starting to use techniques such as peeling, chopping, slicing, mixing. - Cook using a pan or oven safely (with supervision and support). - Know where a wider range of foods come from. - Discuss the importance of a range of varied and nutritious foods. *	- Cut a range of foods safely and hygienically with an appropriate tool. - Measure ingredients using scales or jugs. (appropriate mathematical level) - Follow recipes, starting to use techniques such as peeling, chopping, slicing, mixing, spreading, baking or kneading. - Cook using a pan or oven safely (with supervision and support). - Know where a wider range of foods come from. - Discuss the importance of a range of varied and nutritious foods. * - Discuss the importance of a balanced diet to provide energy for a healthy active lifestyle. *	- Measure ingredients with a degree of accuracy using an appropriate measuring device. - Design their own simple savoury recipes and test them. - Use a range of baking and cooking techniques with increasing confidence (e.g. boiling, frying, baking, grilling, steaming, roasting, microwaving) - Begin to explain why a recipe or meal is healthy or not, giving reasons based on their understanding.*	- Discuss why we need to store and handle food hygienically (microorganisms).* - Measure ingredients with a degree of accuracy using an appropriate measuring device. - Scale recipes up or down accordingly. - Design their own simple savoury recipes and test them. - Use a range of baking and cooking techniques with increasing confidence (e.g. boiling, frying, baking, grilling, steaming, roasting, microwaving) - Begin to explain why a recipe or meal is healthy or not, giving reasons based on their understanding.*

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Products and Design (Evaluation and Analysis)	-Enjoy looking at different products and designs. - Can say whether they like a product/design or not. - Identify materials used to make a product (e.g. plastic, metal, wood).	- Enjoy looking at different products and designs. - Can say whether they like a product/design or not. - Start to ask their own questions about a product or design.	- Enjoy looking at different products and designs. - Can say whether they like a product/design or not. - Make a link between their work and a product. - Start to ask their own questions about a product or design.	- Continue to develop their knowledge of key designers and products. - Can express an opinion about a product. - Make simple comparisons between designers and products. - Discuss when and where a product or design was created. - Discuss: what products are; who they are for; how they are made and what materials are used.	- Continue to develop their knowledge of key designers and products. - Can express an opinion about a product, giving simple reasons why. - Make simple comparisons between designers and products. - Make links between their work and the work of a designer/maker. - Discuss when and where a product or design was created - Begin to make links between key events and individuals in design and technology that have helped shape the world. - Discuss: what products are; who they are for; how they are made and what materials are used.	- Can discuss a range of key designers and products. - Express an opinion about a product, justifying reasons. - Make links between their work and the work of others, noting techniques. - Explore: how well products have been designed and made; why materials have been chosen; what methods of construction have been used; how well products achieve their purpose.	- Can discuss a range of key designers and products. - Express an opinion about a product, justifying reasons. - Make links between their work and the work of others, noting specific influences and techniques. - Explore: how well products have been designed and made; why materials have been chosen; what methods of construction have been used; how well products achieve their purpose.