



# St Cuthbert's Catholic Primary School

## D&T Progression of Knowledge



	EYFS	Nursery (age 3-4)	Reception (age 4-5) /ELG
Design Process	<ul style="list-style-type: none"> <li>- Discuss what a product does or needs to do</li> <li>- Explore the qualities of a range of materials</li> <li>- Make to create an outcome.</li> <li>- Explain why they chose their materials.</li> <li>- Explain what they have made.</li> </ul>	<ul style="list-style-type: none"> <li>- Explore different materials freely, in order to develop their ideas about how to use them and what to make.</li> <li>- Develop their own ideas and then decide which materials to use to express them.</li> <li>- Join different materials and explore different textures.</li> <li>- Create closed shapes with continuous lines, and begin to use these shapes to represent objects.</li> </ul>	<ul style="list-style-type: none"> <li>- Explore, use and refine a variety of artistic effects to express their ideas and feelings.</li> <li>- Return to and build on their previous learning, refining ideas and developing their ability to represent them.</li> <li>- Create collaboratively sharing ideas, resources and skills.</li> <li>- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</li> <li>- Share their creations, explaining the process they have used.</li> <li>- Make use of props and materials when role playing characters in narratives and stories.</li> </ul>
Resistant Materials	<ul style="list-style-type: none"> <li>- Begin to cut and tear materials.</li> <li>- Stick and glue materials together.</li> <li>- Use junk objects to create their own designs.</li> <li>- Begin to consider how they join materials together.</li> </ul>	<ul style="list-style-type: none"> <li>- Explore different materials freely, in order to develop their ideas about how to use them and what to make.</li> <li>- Develop their own ideas and then decide which materials to use to express them.</li> <li>- Join different materials and explore different textures.</li> <li>- Create closed shapes with continuous lines, and begin to use these shapes to represent objects.</li> </ul>	<ul style="list-style-type: none"> <li>- Return to and build on their previous learning, refining ideas and developing their ability to represent them.</li> <li>- Create collaboratively sharing ideas, resources and skills.</li> <li>- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</li> <li>- Share their creations, explaining the process they have used.</li> </ul>
Textiles	<ul style="list-style-type: none"> <li>- Stick and decorate textiles with support.</li> <li>- Thread beads onto a string.</li> </ul> <p>Begin to cut fabric using scissors</p>	<ul style="list-style-type: none"> <li>- Explore different materials freely, in order to develop their ideas about how to use them and what to make.</li> <li>- Develop their own ideas and then decide which materials to use to express them.</li> <li>- Join different materials and explore different textures.</li> <li>- Create closed shapes with continuous lines, and begin to use these shapes to represent objects.</li> </ul>	<ul style="list-style-type: none"> <li>- Explore, use and refine a variety of artistic effects to express their ideas and feelings.</li> <li>- Return to and build on their previous learning, refining ideas and developing their ability to represent them.</li> <li>- Create collaboratively sharing ideas, resources and skills.</li> <li>- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</li> <li>- Share their creations, explaining the process they have used.</li> <li>- Make use of props and materials when role playing characters in narratives and stories.</li> </ul>
Food and Nutrition	<ul style="list-style-type: none"> <li>- Mix pre-prepared ingredients with the support of an adult, safely and hygienically</li> <li>- Use a blunt knife to spread butter or jam (or alternative) on a cracker or bread.</li> </ul> <p>-Understand that fruit and vegetables grow, and which ones are grown in the UK.</p>	<ul style="list-style-type: none"> <li>- Make healthy choices about food, drink.</li> <li>- Plant seeds and care for growing plants.</li> <li>- Understand the key features of the life cycle of a plant and an animal.</li> <li>- Begin to understand the need to respect and care for the natural environment and all living things.</li> </ul>	<ul style="list-style-type: none"> <li>- Know and talk about the different factors that support their overall health and wellbeing: including healthy eating.</li> </ul>

<b>Products and Designers</b>	<ul style="list-style-type: none"> <li>- Enjoy looking at different products and designs.</li> <li>- Can say whether they like a product/design or not.</li> <li>- Identify materials used to make a product (e.g. plastic, metal, wood)</li> </ul>	<ul style="list-style-type: none"> <li>- Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park.</li> </ul>	<ul style="list-style-type: none"> <li>- Explore, use and refine a variety of artistic effects to express their ideas and feelings.</li> <li>- Return to and build on their previous learning, refining ideas and developing their ability to represent them.</li> <li>- Create collaboratively sharing ideas, resources and skills.</li> <li>- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</li> <li>- Share their creations, explaining the process they have used.</li> <li>- Make use of props and materials when role playing characters in narratives and stories.</li> </ul>
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<b>Key Stage 1</b>	
<b>Design Process</b>	<ul style="list-style-type: none"> <li>- Work from a basic brief to generate ideas and design a simple product fit for purpose and audience.</li> <li>- Explore suitability of common materials before making a choice.</li> <li>- Show awareness of some products similar to their design.</li> <li>- Develop ideas, communicating and recording them in a suitable way (e.g. design book, design page, IT, mind map)</li> <li>- Make a simple mock-up.</li> <li>- Make a final product.</li> </ul> <p>Evaluate their final product – what went well? Did they follow the brief?</p>
<b>Resistant Materials</b>	<ul style="list-style-type: none"> <li>- Follow basic procedures for safety.</li> <li>- Cut materials safely using scissors.</li> <li>- Tear, fold and curl materials.</li> <li>- Join using gluing and taping.</li> <li>- Begin to use a simple hinge.</li> <li>- Select materials and tools based on their properties.</li> <li>- Create products based on a design.</li> <li>- Explore and use simple mechanisms [e.g. levers, sliders, wheels and axles], in their products.</li> </ul> <p>Build structures, exploring how they can be made stronger, stiffer and more stable.</p>

Textiles	<ul style="list-style-type: none"> <li>- Cut textiles using scissors and a template.</li> <li>- Decorate textiles using crayons, paint or sticking.</li> <li>- Join textiles using glue.</li> <li>- Use a running stitch to join textiles using pre-prepared holes.</li> </ul> <p>Create simple weaving using paper or large strips of fabric.</p>
Food and Nutrition	<ul style="list-style-type: none"> <li>- Cut soft foods safely and hygienically using an appropriate tool.</li> <li>- Measure using measuring cups and spoons.</li> <li>- Assemble ingredients to make a simple recipe.</li> <li>- Discuss what a healthy and varied diet should look like, naming and sorting using the five main groups.</li> <li>- Know where a range of fruits and vegetables come from.</li> </ul>
Products and Designers	<ul style="list-style-type: none"> <li>- Enjoy looking at different products and designs.</li> <li>- Can say whether they like a product/design or not.</li> <li>- Make a link between their work and a product.</li> <li>- Start to ask their own questions about a product or design.</li> </ul>
<b>Lower Key Stage 2</b>	
Design Process	<ul style="list-style-type: none"> <li>- Work from a brief to design an appealing, functional product fit for purpose and audience.</li> <li>- Explore some possible materials, conducting a simple test to ensure suitability before making a choice.</li> <li>- Show awareness of products similar to their own.</li> <li>- Develop an idea, communicating and recording it in a suitable way (e.g. annotated design page, diagrams, IT)</li> <li>- Perform basic tests, make simple prototypes/pattern pieces as appropriate.</li> <li>- Create a final idea and translate this into a final product which fits the brief.</li> <li>- Evaluate their final product – what went well? Did they follow the brief? How could they improve their design?</li> </ul>
Resistant Materials	<ul style="list-style-type: none"> <li>- Follow procedures for safety.</li> <li>- Cut, tear and shape materials with increasing accuracy.</li> <li>- Use a wider range of joining methods (e.g. fasteners, tabs, flange)</li> <li>- Choose appropriate materials and tools for a product based on their functional properties and aesthetics.</li> <li>- Strengthen, stiffen and reinforce a product using suitable materials.</li> <li>- Make mechanical /moving elements (e.g. pulleys, levers and linkages)</li> <li>- Choose appropriate materials by testing their properties using a prototype.</li> </ul>

	<ul style="list-style-type: none"> <li>- Incorporate a simple electrical system into their product.*</li> </ul>
<b>Textiles</b>	<ul style="list-style-type: none"> <li>- Cut textiles with scissors safely.</li> <li>- Thread a needle and tie a knot. (e.g. wool/embroidery needle)</li> <li>- Use a running stitch to join textiles.</li> <li>- Decorate textiles using stamping, printing and simple embellishment.</li> <li>- Weave using a cardboard loom.</li> </ul>
<b>Food and Nutrition</b>	<ul style="list-style-type: none"> <li>- Cut a range of foods safely and hygienically with an appropriate tool.</li> <li>- Measure ingredients using scales or jugs.</li> <li>- Follow recipes, starting to use techniques such as peeling, chopping, slicing, mixing, spreading, baking or kneading.</li> <li>- Cook using a pan or oven safely (with supervision and support).</li> <li>- Know where a wider range of foods come from.</li> <li>- Discuss the importance of a range of varied and nutritious foods. *</li> <li>- Discuss the importance of a balanced diet to provide energy for a healthy active lifestyle. *</li> </ul>
<b>Products and Designers</b>	<ul style="list-style-type: none"> <li>- Continue to develop their knowledge of key designers and products.</li> <li>- Can express an opinion about a product, giving simple reasons why.</li> <li>- Make simple comparisons between designers and products.</li> <li>- Make links between their work and the work of a designer/maker.</li> <li>- Discuss when and where a product or design was created</li> <li>- Begin to make links between key events and individuals in design and technology that have helped shape the world.</li> <li>- Discuss: what products are; who they are for; how they are made and what materials are used.</li> </ul>
<b>Upper Key Stage 2</b>	
<b>Design Process</b>	<ul style="list-style-type: none"> <li>- Work from a brief with a simple constraint (e.g. audience / purpose) to design an appealing, functional product.</li> <li>- Research a range of materials, conducting tests as appropriate before selecting the best choice.</li> <li>- Research products similar and different to their own to inform their own design.</li> <li>- Develop a design idea, communicating and recording it via a plan and a labelled diagram.</li> <li>- Test ideas using prototypes/creating pattern pieces and where relevant computer aided design.</li> <li>- Develop and make a final product, based on testing, which meets the brief criteria.</li> <li>- Evaluate their final product, including discussion amongst peers to assess their product against the brief and consider improvements.</li> </ul>

<b>Resistant Materials</b>	<ul style="list-style-type: none"> <li>- Follow procedures for safety with a wider range of tools and processes.</li> <li>- Cut and shape materials based on their design with increasing accuracy.</li> <li>- Choose appropriate tools and methods to cut and form a wider range of materials.</li> <li>- Choose appropriate materials by testing their properties using prototypes, justifying their choices.</li> <li>- Make mechanical /moving elements (e.g. gears, cams and pneumatics)</li> <li>- Use a wider range of joining methods (e.g. inserts, wrap, gusset, notch)</li> <li>- Incorporate a more complex electrical system into their designs (e.g. more than one component / adding a switch).</li> <li>- Use computing to program, monitor and control their products.*</li> </ul>
<b>Textiles</b>	<ul style="list-style-type: none"> <li>- Use seam allowance and back stitch to join textiles to create a simple product (e.g. A cushion or soft toy).</li> <li>- Use a pattern/template to mark and cut fabric into a specific shape</li> <li>- Use cross stitch, running stitch or filling stitch.</li> <li>- Use applique</li> <li>- Thread a needle and tie a knot, including finishing a thread and starting a new one within a project.</li> <li>- Choose appropriate materials for a textile product based on its use.</li> <li>- Weave using a variety of materials.</li> <li>- Sew a button or bead onto a project.</li> </ul>
<b>Food and Nutrition</b>	<ul style="list-style-type: none"> <li>- Discuss why we need to store and handle food hygienically (micro-organisms).*</li> <li>- Measure ingredients with a degree of accuracy using an appropriate measuring device.</li> <li>- Scale recipes up or down accordingly.</li> <li>- Design their own simple savoury recipes and test them.</li> <li>- Use a range of baking and cooking techniques with increasing confidence (e.g. boiling, frying, baking, grilling, steaming, roasting, microwaving)</li> <li>- Begin to explain why a recipe or meal is healthy or not, giving reasons based on their understanding.*</li> </ul>

## Products and Designers

- 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.