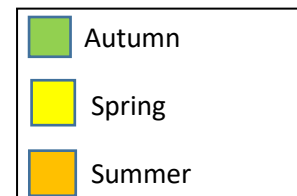




# St Margaret's C of E Junior School

## Progression of Skills and Knowledge in Design & Technology Years 3 & 4



Skills	Year 3	Year 4
<p><b>Knowledge</b></p> <p><b><u>Developing, planning and communicating ideas.</u></b></p>	<ul style="list-style-type: none"> <li>-Gather ideas by drawing on their own and other people's experiences -begin to research the needs of others and design meeting a range of requirements</li> <li>-Generate ideas for a product, describe its purpose for which they are designing.</li> <li>-Consider appearance, taste, texture and aroma for an appealing product</li> <li>-Use recipes to test or generate ideas for a sandwich</li> <li>-Set and follow criteria for a successful product.</li> <li>- Have at least one idea about creating the product, plan the order of their work before starting with basic listing of steps, equipment and tools</li> <li>-Describe design using accurately labelled sketch with words and explain how it will work</li> <li>-Begin to make prototypes and use computers where possible to show design.</li> <li>-Link structures with maths and language related to shape.</li> <li>-Develop an understanding of what a basic net is and how it links with structure.</li> <li>-Know key vocab: designer, purpose, product, functional, evaluate</li> <li>-Understand what a recipe is and generate own with ingredients and utensils</li> <li>-Use maths language related to shape when creating structures – 3D, cylinders, weight, triangular, base....</li> <li>-Know what a shell structure is.</li> <li>-Know what a healthy sandwich is.</li> <li>-Identify textile examples.</li> <li>-Know how to construct a basic, stiff, shell structure</li> </ul>	<ul style="list-style-type: none"> <li>-Gather ideas by drawing on their own and other people's experiences</li> <li>- Generate ideas through research, considering the purposes for which they are designing and meets needs of their users.</li> <li>-Consider appearance, taste, texture and aroma for an appealing product</li> <li>-Use recipes to test or generate ideas for pitta bread/ cultural bread and dips</li> <li>- Identify and create own criteria that can be used for their own designs and evaluate the product based on this, making suggestions for improvements.</li> <li>-Have an idea how to create the product, produce a plan and explain it to others.</li> <li>-Make annotated drawings from different views showing specific features and explain how they work.</li> <li>- Suggest alternative methods of making, if the first attempts fail</li> <li>- Begin to make prototypes and use computers where possible to show design.</li> <li>- Know key vocab: designer, purpose, product, user, criteria, features, evaluate</li> <li>-Understand what a recipe is and generate own with ingredients, utensils and steps</li> <li>-Know what a healthy sandwich is and can select examples</li> <li>-Know about fresh and processed ingredients and whether grown, reared or caught</li> <li>-Identify food from different cultures and countries</li> <li>-Use Science language related to electricity when creating torches</li> <li>-Understand the term mechanism</li> <li>-Identify the key components in a mechanism using language such as lever, pivot, slider, flap, rotate</li> </ul>
<p><b><u>Working with tools, equipment, materials and components to make quality products (including food)</u></b></p>	<ul style="list-style-type: none"> <li>-Select tools and techniques for making their product and explain choices</li> <li>-Begin to use names of tools and techniques</li> <li>- Use tools to measure, mark out, cut, score and assemble components with more accuracy</li> <li>-Work safely with a range of simple tools</li> <li>--Weigh and measure accurately (length, dry ingredients)</li> <li>-Measure, tape or pin, cut and join fabric with some accuracy, exploring basic stitches</li> <li>- Select and use appropriate fruit and vegetables.</li> <li>-Demonstrate basic hygienic food preparation and storage</li> <li>-Use finishing techniques with some accuracy to strengthen and improve the appearance of their product using a range of equipment including ICT</li> <li>-Name and identify different basic stitches.</li> <li>-Name the tools and materials they have used.</li> <li>-Know what a pattern/template is and how to use one.</li> <li>-Know how to strengthen, stiffen or reinforce when using textiles or creating structures</li> <li>-Explain how to securely join two pieces of material together</li> <li>-Understand about healthy eating and provide food examples based on food groups</li> <li>-Name utensils and ingredients</li> <li>-Identify between fresh and processed foods</li> </ul>	<ul style="list-style-type: none"> <li>-Select appropriate tools and techniques for making their product and explain choices of tool in relation to techniques</li> <li>-Use correct name of tools and techniques with growing confidence</li> <li>-Accurately measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques</li> <li>- Join and combine materials and components accurately in temporary and permanent ways</li> <li>-Work safely and accurately with a range of simple tools</li> <li>-Weigh and measure accurately (length, dry ingredients, time)</li> <li>-Sew using a range of different stitches, weave and knit</li> <li>-Measure, tape or pin, cut and join fabric with some accuracy</li> <li>- Select and use appropriate fruit and vegetables to meet specific criteria and user needs.</li> <li>-Demonstrate hygienic food preparation and understand the reasons for safe storage, know safe chopping and slicing techniques</li> <li>-Accurately use finishing techniques strengthen and improve the appearance of their product using a range of equipment including ICT</li> <li>-Name a broader range of stitches such as zig-zag and chain.</li> <li>-Name and match the tool to the material and explain its use.</li> <li>-Name utensils, ingredients and techniques being used – sliced, diced...</li> <li>-Identify between fresh and processed foods and know why some foods are processed</li> <li>-Know and identify the electrical components in a circuit and the purpose of each part</li> <li>-Name how to construct a simple circuit with a switch and bulb</li> <li>-Know how to construct a lever and linkage system and the movement created</li> <li>-Explain the differences between fixed and loose pivots</li> </ul>
<p><b><u>Evaluating processes and products</u></b></p>	<ul style="list-style-type: none"> <li>-Use criteria to evaluate finished product and state improvements</li> <li>-Investigate a range of textile/3D products/shells and structures relevant to the project</li> <li>-Evaluate and test their product against original design criteria</li> <li>-Disassemble and evaluate familiar products</li> <li>-Explain the sensory characteristics of a product</li> <li>-Understand how products are made: by whom, when and where – consider inventors/designers/engineers/chefs/ground breaking products/ethically made products</li> <li>-Know and use relevant sensory and technical vocabulary</li> <li>-Explain how the product compares with the design</li> <li>-Identify sensory characteristics when describing a product</li> </ul>	<ul style="list-style-type: none"> <li>-Use design criteria while designing and making – using it to evaluate product</li> <li>-Explain how you could improve original design whilst using criteria to evaluate product</li> <li>-Evaluate existing products, considering: how well they've been made, whether they work,</li> <li>-Discuss the maker – made by whom, when and where products were designed</li> <li>-Research whether products can be recycled or reused</li> <li>-know about some inventors/designers/ engineers/chefs/manufacturers of ground -breaking product</li> <li>-Investigate and analyse a range of existing battery powered products/torches/pop-up books</li> <li>-Evaluate their work both during and at the end of the assignment</li> <li>-Evaluate their product carrying out appropriate tests against original design criteria and state the successes/development points</li> <li>-Disassemble and evaluate familiar products looking at key components</li> <li>-Know and use relevant sensory and technical vocabulary to describe texture and aroma of food</li> <li>-Know and use technical vocabulary relevant to circuits and torches</li> <li>-Identify levers and linkages within books, using relevant vocabulary when discussing the mechanisms</li> </ul>