## Design and Technology

## St. Ethelbert's RCP



## Design and Technology Knowledge & Skills Progression KS1

	NATIONAL CURRICULUM
	Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts - for example: the home and school; gardens and playgrounds; the local community; industry and the wider environment. Pupils should be taught to:
	<ul> <li>Design:</li> <li>Design purposeful, functional, appealing products for themselves and other users based on design criteria.</li> <li>Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.</li> </ul>
	<ul> <li>Make:</li> <li>Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].</li> <li>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</li> </ul>
Aims	<ul> <li>Evaluate:</li> <li>Explore and evaluate a range of existing products.</li> <li>Evaluate their ideas and products against design criteria.</li> </ul>
	<ul> <li>Technical knowledge:</li> <li>Build structures, exploring how they can be made stronger, stiffer and more stable.</li> <li>Explore and use mechanisms (for example, levers, sliders, wheels and axles), in their products.</li> </ul>
	<ul> <li>Cooking and nutrition:         <ul> <li>As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life.</li> </ul> </li> <li>Pupils should be taught to:</li> </ul>
	<ul> <li>Use the basic principles of a healthy and varied diet to prepare dishes.</li> <li>Understand where food comes from.</li> </ul>

Design and Technology Skills Progression

	YEAR 1	YEAR 2
Strands :		
Cooking and Nutrition	<ul> <li>Name and use a range of basic tools safely - measuring spoon, peeler and wooden spoons.</li> <li>Use a range of food preparation skills with supervision,-peeling, mixing, squeezing and scooping</li> <li>Work with an adult to make food following a simple recipe.</li> <li>Be able to get ready to cook - tie back long hair, wash hands and wear an apron</li> <li>Understand the need for a variety of foods in a diet - that we need 5 portions of fruit and veg a day.</li> <li>Understand where food comes from - that it is a plant or animal.</li> </ul>	<ul> <li>Name and use a range of basic tools safely - chopping board, grater and small knife.</li> <li>Use a range of food preparation skills with supervision - grating and spreading; cutting with scissors.</li> <li>Prepare a healthy dish/drink safely and hygienically with support.</li> <li>Recognise the importance of preparing and cooking food safely and hygienically - handwashing, cleaning up regularly and keep work surfaces clean.</li> <li>Sort a variety of foods in our diet groups onto an 'eat well' plate.</li> <li>Know where and how ingredients are grown - home or farms or caught.</li> </ul>
Design	<ul> <li>Explain what they are making, who it is for (them or someone else?) and what it is to be used for.</li> <li>Generate ideas by drawing on own experiences.</li> <li>Begin to use simple design criteria to help develop their ideas with some adult support - pictures to convey what they want to make.</li> <li>Model ideas by exploring materials and components.</li> <li>Use IT - photos to develop ideas and communicate ideas.</li> </ul>	<ul> <li>State what products they are designing and making, how it is suitable for the intended user and how it will work.</li> <li>Use knowledge of existing products to help come up with ideas.</li> <li>Use simple design criteria to help develop their ideas - using words and pictures to convey what they want to make.</li> <li>Model ideas by making templates and simple mock ups, with adult support/in groups.</li> <li>Use IT (2publish) to develop ideas and communicate ideas.</li> </ul>
Make	<ul> <li>Explain what to do using: FirstNextLast</li> <li>Use appropriate joining techniques for different materials and situations - glue, tape, insert paper fasteners for card linkages.</li> <li>Use a range of materials to create models - roll paper to create tubes.</li> <li>Select materials from a limited range that will meet the design criteria.</li> <li>Mark out and cut materials and components.</li> <li>Use finishing techniques - felt tip pens, paints or crayons.</li> </ul>	<ul> <li>Plan how to make a design saying what should be done in steps.</li> <li>Combine materials and components - join fabrics by using running stitch, overstitch, glue guns, staples and tape.</li> <li>Select from a limited range of tools and equipment.</li> <li>Select from a range of materials and make suggestions to suitability. E.g. talk about how structures can be made stronger.</li> <li>Measure and mark out, cut and shape materials and components.</li> <li>Use finishing techniques include those learned in Art and Design.</li> </ul>
Evaluate	<ul> <li>Explore what products are, who they are for and what they are for.</li> <li>Explore and say what they like about a product.</li> <li>Name one or two materials which are used in the product.</li> <li>Identify whose project worked well and why.</li> </ul>	<ul> <li>Explore how products work, who uses them and where they might be used.</li> <li>Explore what they like and dislike about a product.</li> <li>Identify which materials are used in a product.</li> <li>Make simple judgements about their products and ideas against a</li> </ul>

	<ul> <li>Identify one thing that didn't work well on own design.</li> <li>Talk about their designs as they develop.</li> </ul>	<ul> <li>criteria</li> <li>Make suggestions how designs can be improved next time.</li> <li>Talk about their designs as they develop and identify good and bad points.</li> </ul>
Technical Knowledge	<ul> <li>Begin to explain the simple workings and characteristics of materials.</li> <li>Talk about the movement of simple mechanisms, such as levers and sliders.</li> <li>Know how free standing structures can be made stronger and stiffer and more stable.</li> <li>Begin to use correct vocabulary for the projects undertaken e.g. slider, lever, pivot, slot, bridge /guide.</li> </ul>	<ul> <li>Know about, engineers who have developed ground breaking products.</li> <li>Explain the simple workings characteristics of materials and components.</li> <li>Talk about the movement of simple mechanisms such as wheels and axles.</li> <li>Know textiles can be assembled from two identical fabric shapes.</li> <li>Use the correct vocabulary for the projects undertaking - e.g. join, fold fabrics components template pattern pieces</li> </ul>