The Laurels Primary School – Progression of Skills – Design and Technology

	EYFS	Year 1	Year 2	End of KS expectations	Year 3	Year 4	Year 5	Year 6	End of KS expectations
Research (existing products, materials, designers)		* Explore the sensory qualities of materials * Explore ways to construct models * Recognise how structures can be made stronger, stiffer and more stable	* Explore a range of existing products * Discover where foods come from in choosing, preparing and tasting different dishes * Evaluate a range of existing products	When designing and making, pupils should be taught to: - use the basic principles of a healthy and varied diet to prepare dishes - understand where food comes from. **Design** - design purposeful, functional, appealing products for themselves and other users based on design criteria - generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology **Make** - select from and use a range of tools and equipment to perform practical tasks [for example, 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** - explore and evaluate a range of existing products - evaluate their ideas and products against design criteria **Technical knowledge** - build structures, exploring how they can be made stronger, stiffer and more stable - explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	* Generate, develop and explain ideas for products to meet a range of needs * Explore ways of meeting design challenges with a food focus using a range of cooking techniques	* Use research to inform their design * Explore ways of meeting design challenges with a textile focus	* Investigate ways of meeting design challenges with a construction focus * Investigate how the work of individuals in design and technology has helped to shape the world * Identify users' views and take these into account * Analyse a range of existing products	* Draw on and use various sources of information, including ICT sources	When designing and making, pupils should be taught to: - 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. **Design** - 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** - select from and use a wider range of tools and equipment to perform practical tasks [for example, 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 **Evaluate** - 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 **Technical knowledge** - apply their understanding of how to strengthen, stiffen and reinforce more complex structures - understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] - understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
Design (purpose, criteria, sketching, diagrams, CAD, prototypes)		* Identify a target group for what they intend to design and make * Generate and talk about their own ideas * Take account of simple properties of materials when deciding how to cut, shape, combine and join them	* Identify a purpose for what they intend to design and make * Identify simple design criteria then plan what to do next, using a variety of methods * Communicate their ideas using a variety of methods e.g. drawing, making mock-ups, ICT		* Identify a purpose and establish criteria for a successful product * Communicate design ideas in different ways e.g. discussion, annotated sketches, cross-sectional diagrams and prototypes	* Communicate design ideas in different ways e.g. discussion, annotated sketches, cross-sectional diagrams and prototypes	* Plan what they have to do, including how to use materials, equipment and processes * Communicate design ideas in different ways e.g. discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design * Apply knowledge of mechanical and electrical control when designing and making functional products	* Generate and clarify ideas for products, considering intended purpose * Plan what they have to do, suggesting a sequence of actions and alternatives if needed * Choose how to communicate design ideas as they develop, considering use and purpose	
Make (using tools, cutting, joining, shaping, measuring)		* Follow safe procedures * Use tools and materials with help	* Observe and take account of properties of materials when deciding how to cut, shape, combine and join them * Measure, mark, cut out and shape a range of materials * Use mechanisms in their products e.g. wheels, sliders * Use simple finishing techniques		* Selecting appropriate tools and techniques, name and describe them * Measure, mark, cut out and shape a range of materials and assemble, join and combine components and materials with some accuracy	* Select from and use a range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities * Join and combine materials and components accurately in temporary and permanent ways * Measure, mark, cut out and shape a range of materials and assemble, join and combine components and materials with increasing accuracy	* Estimate and measure using appropriate instruments and units * Refine sequences of instructions to control events or make things happen	* Check work as it develops and modify as necessary * Select from a wide range of tools and equipment to perform practical tasks accurately	
Evaluate (strengths, weaknesses, improvements, design criteria, feedback)			* Identify what they could have done differently or how they could improve their work in the future * Talk about their ideas, saying what they like and		* Evaluate work, adapting and improving where appropriate	* Evaluate work, adapting and improving through the views of others to improve their work		* Explore alternative ways of making their product, if first attempts fail * Evaluate their products, identifying strengths and areas for development,	

			dislike, and evaluate against their design criteria					and make appropriate changes	- apply their understanding of computing to program, monitor and control their products.