



Larmenier & Sacred Heart Catholic Primary School

Design & Technology Milestones for Progress (End Points)

Threshold Concepts 'Big Ideas'		Milestone 1 (By the end of Year2)	Milestone 2 (By the end of Year4)	Milestone 3 (By the end of Year6)	Skills Across KS2
Designing	Understanding contexts, users and purposes	<ul style="list-style-type: none"> Work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment State what products they are designing and making Say whether their products are for themselves or other users Describe what their products are for Say how their products will work Say how they will make their products suitable for their intended users Use simple design criteria to help develop their ideas 	<ul style="list-style-type: none"> Gather information about the needs and wants of particular individuals and groups Develop their own design criteria and use these to inform their ideas 	<ul style="list-style-type: none"> Carry out research, using surveys, interviews, questionnaires and web-based resources Identify the needs, wants, preferences and values of particular individuals and groups Develop a simple design specification to guide their thinking 	<ul style="list-style-type: none"> Work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment Describe the purpose of their products Indicate the design features of their products that will appeal to intended users Explain how particular parts of their products work
	Generating, developing, modelling and communicating ideas	<ul style="list-style-type: none"> Generate ideas by drawing on their own experiences Use knowledge of existing products to help come up with ideas Develop and communicate ideas by talking and drawing Model ideas by exploring materials, components and construction kits and by making templates and mock-ups Use information and communication technology, where appropriate, to develop and communicate their ideas 	<ul style="list-style-type: none"> Generate realistic ideas, focusing on the needs of the user Make design decisions that take account of the availability of resources 	<ul style="list-style-type: none"> Generate innovative ideas, drawing on research Make design decisions, taking account of constraints such as time, resources and cost 	<ul style="list-style-type: none"> Share and clarify ideas through discussion Model their ideas using prototypes and pattern pieces Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas Use computer-aided design to develop and communicate their ideas

Making	Planning	<ul style="list-style-type: none"> Plan by suggesting what to do next Select from a range of tools and equipment, explaining their choices Select from a range of materials and components according to their characteristics 	<ul style="list-style-type: none"> Order the main stages of making 	<ul style="list-style-type: none"> Produce appropriate lists of tools, equipment and materials that they need Formulate step-by-step plans as a guide to making 	<ul style="list-style-type: none"> Select tools and equipment suitable for the task Explain their choice of tools and equipment in relation to the skills and techniques they will be using Select materials and components suitable for the task Explain their choice of materials and components according to functional properties and aesthetic qualities
	Practical skills and techniques	<ul style="list-style-type: none"> Follow procedures for safety and hygiene Use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components Begin to measure, mark out, cut and shape materials and components Assemble, join and combine materials and components Use finishing techniques, including those from art and design 	<ul style="list-style-type: none"> Measure, mark out, cut and shape materials and components with some accuracy Assemble, join and combine materials and components with some accuracy Apply a range of finishing techniques, including those from art and design, with some accuracy 	<ul style="list-style-type: none"> Accurately measure, mark out, cut and shape materials and components Accurately assemble, join and combine materials and components Accurately apply a range of finishing techniques, including those from art and design Use techniques that involve a number of steps Demonstrate resourcefulness when tackling practical problems 	<ul style="list-style-type: none"> Follow procedures for safety and hygiene Use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components
Evaluating	Own ideas and products	<ul style="list-style-type: none"> Talk about their design ideas and what they are making Make simple judgements about their products and ideas against design criteria Suggest how their products could be improved 	<ul style="list-style-type: none"> Refer to their design criteria as they design and make Use their design criteria to evaluate their completed products 	<ul style="list-style-type: none"> Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make Evaluate their ideas and products against their original design specification 	<ul style="list-style-type: none"> Identify the strengths and areas for development in their ideas and products Consider the views of others, including intended users, to improve their work

	Existing products	<ul style="list-style-type: none"> Learn what products are Understand who products are for Know what products are for Begin to learn how products work Explore how products are used Understand where products might be used Investigate what materials products are made from State what they like and dislike about products 	<ul style="list-style-type: none"> Investigate who designed and made the products Gather information about where products were designed and made Talk about when products were designed and made Know whether products can be recycled or reused 	<ul style="list-style-type: none"> Investigate how much products cost to make Talk about how innovative products are Evaluate how sustainable the materials in products are Critically evaluate what impact products have beyond their intended purpose 	<ul style="list-style-type: none"> Identify how well products have been designed Evaluate how well products have been made Think about why materials have been chosen Look into what methods of construction have been used Evaluate how well products work and how well products achieve their purposes Evaluate how well products meet user needs and wants
	Key events and individuals	Not a requirement in KS1	See across KS2	See across KS2	<ul style="list-style-type: none"> Research information about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products
Technical knowledge	Making products work	<ul style="list-style-type: none"> Learn about the simple working characteristics of materials and components Find out about the movement of simple mechanisms such as levers, sliders, wheels and axles Explore how freestanding structures can be made stronger, stiffer and more stable Discover that a 3-D textiles product can be assembled from two identical fabric shapes Understand that food ingredients should be combined according to their sensory characteristics 	<ul style="list-style-type: none"> Understand how mechanical systems such as levers and linkages or pneumatic systems create movement Explore how simple electrical circuits and components can be used to create functional products Learn how to program a computer to control their products Explore how to make strong, stiff shell structures Know that a single fabric shape can be used to make a 3D textiles product 	<ul style="list-style-type: none"> Investigate how mechanical systems such as cams or pulleys or gears create movement Understand how more complex electrical circuits and components can be used to create functional products Know how to program a computer to monitor changes in the environment and control their products Use techniques to reinforce and strengthen a 3D framework 	<ul style="list-style-type: none"> Delve into how to use learning from science to help design and make products that work Use learning from mathematics to help design and make products that work Understand that materials have both functional properties and aesthetic qualities Use evaluation skills to find out that materials can be combined and mixed to create more useful characteristics

		<ul style="list-style-type: none"> • Talk about the correct technical vocabulary for the projects they are undertaking 	<ul style="list-style-type: none"> • Learn that food ingredients can be fresh, pre-cooked and processed 	<ul style="list-style-type: none"> • Understand how a 3D textiles product can be made from a combination of fabric shapes • Explore how a recipe can be adapted by adding or substituting one or more ingredients 	<ul style="list-style-type: none"> • Learn that mechanical and electrical systems have an input, process and output • Learn the correct technical vocabulary for the projects they are undertaking
Cooking and nutrition	Where food comes from	<ul style="list-style-type: none"> • Understand that all food comes from plants or animals • Learn that food has to be farmed, grown elsewhere (e.g. home) or caught 	See across KS2	<ul style="list-style-type: none"> • Learn how seasons may affect the food available • Discover how food is processed into ingredients that can be eaten or used in cooking 	<ul style="list-style-type: none"> • Talk about how food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world
	Food preparation, cooking and nutrition	<ul style="list-style-type: none"> • Explore how to name and sort foods into the five groups in The Eatwell plate • Know that everyone should eat at least five portions of fruit and vegetables every day • Use new skills to prepare simple dishes safely and hygienically, without using a heat source • Safely understand how to use techniques such as cutting, peeling and grating 	<ul style="list-style-type: none"> • Understand that a healthy diet is made up from a variety and balance of different food and drink, as depicted in the Eatwell plate • Know that to be active and healthy, food and drink are needed to provide energy for the body 	<ul style="list-style-type: none"> • Experiment to find out that recipes can be adapted to change the appearance, taste, texture and aroma • Know that different food and drink contain different substances – nutrients, water and fibre – that are needed for health 	<ul style="list-style-type: none"> • Learn how to prepare and cook predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source • Understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking