Design and Technology Progression Map

St.Brigid's Catholic Primary School

	EYFS					
	19-24 months	**25-30 months**	**31-36 months**	**37-42 months**	**43-48 months**	**49-54 months**
Design and Technology Skills		EUMM - Explores the textures, movement, feel and look of different media and materials including sounds.	EUMM - Responds to a wide range of media and materials showing an understanding that they can manipulate and create effects with these.	EUMM - Representations and responses show understanding that different media, music or materials will support the expression of their own ideas. BI - Creates or builds new 'worlds', stories or scenarios.	EUMM - Constructs with a purpose in mind using a variety of resources to create a model, dance or composition. BI - Uses a resource or material in a different or unusual way, showing intent as they do so.	EUMM - Uses simple tools and techniques competently and appropriately to create something new.
	55-60 months	**61-66 months**		**67+ months**		
	EUMM - Selects appropriate resources and adapts work where necessary to create and change a piece of music, art, a picture or model.	EUMM - Sing songs, makes music and dances, experiments with ways of changing them. Safely uses and explores a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. BI - Uses what they have learned about media and materials in original ways, thinking about uses and purposes. They can represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories.		EUMM - Selects and uses materials to work on processes that interest them. Through their explorations finds out and makes decisions about how media and materials can be combined and changed. BI - Talks about ideas and processes which have led them to make music, designs, images or products. Can talk about features of their own and others work, recognising the differences between them and the strengths of others.		

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		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	Contexts, Uses and Purposes	To gather information about their end product. Design products with a clear purpose and an intended user (to meet design criteria). Explore different materials. Which material is best for the purpose? Discuss ideas and create annotated sketches (drawing on own experiences).	To research and gather information about their end product. Design products with a clear purpose and an intended user (to meet design criteria). To refine the design as work progresses. Discuss ideas and create annotated sketches. Make templates and mock ups (drawing on own experiences or from reading).	To investigate the needs and wants of particular individuals and groups. Develop their own design criteria and explain their reasoning for their design. Share and clarify ideas through discussion. Create annotated sketches and model ideas using pattern pieces. To use computer aided-design to express their ideas.	To investigate the needs and wants of particular individuals and groups. To research designs. Develop their own design criteria and use this to inform/ adapt their design. Create annotated sketches and cross-sectional diagrams. Model ideas using prototypes.	Carry out research, using surveys and questionnaires. Identify the needs, wants, preferences and values of particular individuals and groups. Develop a simple deign specification. To use pattern pieces and develop prototypes.	Carry out research, using interviews, questionnaires and web-based resources. Generate innovative ideas, drawing on research. Identify the needs, wants, preferences and values of particular individuals and groups. Develop a simple deign specification and make decisions taking into account constraints, such as: time, resources and cost. Create annotated sketches and cross-sectional diagrams. To use computer aided-design.

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		Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Make	Planning	Select from a range of tools and equipment explaining their choices. Select from a range of materials and components according to their characteristics.		Select tools and equipment that are suitable for the task. Explain their choices and share reasoning. Select materials and components that are most suitable for the task and explain their choices. Order the main stages of making. Produce lists of tools, equipment and materials needed.		Select the most appropriate tools and equipment needed. Explain their choice in relation to the skills and techniques that they will be using. Select materials and components that are the most suitable for the task. Explain their choice according to functional properties and aesthetic qualities. Order and explain the main stages of making. Produce detailed lists of tools, equipment and materials needed.	
	Practical Skills and Techniques	Follow procedures for safety. Cut out and shape materials. Join and combine materials. Use simple fixing materials e.g. temporary (tape) and permanent (glue).	Follow procedures for safety. Use and make own templates. Measure, mark out, cut out and shape materials and components. Assemble, join and combine materials and components. Use simple fixing materials e.g. temporary (paper clips, tape) and permanent (glue, staples). Use finishing techniques from Art and Design.	Follows procedures for safety. Use a wider range of materials and components, including construction materials/ kits, textiles, food ingredients, mechanical components and electrical components. Measure, mark out, cut and shape materials and components with some accuracy. Assemble, join and combine materials/ components with some accuracy. Apply a range of finishing techniques, including those from Art and Design.		Accurately measure to the nearest mm, mark out, cut and shape materials/ components. Accurately assemble, join and combine materials/ components. Apply a range of finishing techniques effectively and accurately, including those from Art and Design. Use techniques that involve a number of steps. Demonstrate resourcefulness e.g. make refinements.	

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Evaluate	Own Ideas and Products	Talk about design ideas and what they have made. Make simple judgements about their products based on the agreed design criteria. Suggest how their products can be improved.	Make judgements about their products/ ideas based on the agreed design criteria. Suggest how their products can be improved. Evaluate the effectiveness of products and components used.	Identify the strengths and weaknesses of their ideas and products. Refer back to their design criteria and use this to evaluate the overall effectiveness.		Identify the strengths and weaknesses of their ideas and products. Compare their ideas and products to their original design specification, considering the views of others.	
				Consider the views of others when evaluating their product.	Consider the views of others, including intended users, to improve their work.	Evaluate the design and fitness for purpose of their products.	Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make.
	Existing Products	Investigate – What products are? Who are they for? How are they made? What materials are used? Why?		Investigate - How well have products been designed/ made? Why have the materials been chosen? What methods of construction were used? How well does the product work? How well does the product achieve purposes and meet user needs?			
				Dissemble products to explore how they work. Investigate - Who designed and made the product? When was the product made? Can it be recycled or reused? How effective are the materials/ components?		Dissemble products to explore how they work. How could they be made better or changed? What impact would this have? Investigate – How much did the product cost to make? How innovative is this product? Are the materials used in the product sustainable?	
	Key Events/ Individuals			Identify great designers and their work. Use this research to influence their work.			
				Thomas Saint (sewing machine)	Thomas Edison (light bulb)	Jamie Oliver (chef)	Alan Turing (pioneer of computer science)

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Technical Knowledge	Making Products Work	Use the correct technical vocabulary for the projects that they are undertaking. Understand the simple characteristics of materials and components. Understand that food ingredients should be combined according to their sensory characteristics.		Use the correct technical vocabulary for the projects that they are undertaking. Know that food ingredients can be fresh, pre-cooked and processed.		Use the correct technical vocabulary for the projects that they are undertaking. Know that a recipe can be adapted by adding or substituting one or more ingredients.	
				Know that mechanical and electrical systems have an input, process and output. Know that materials can be combined and mixed to create more useful characteristics.			
		Understand how free standing structures can be made stronger, stiffer and more stable. Understand the movement of simple mechanisms, including levers and sliders.	Understand about the movement of simple mechanisms, including wheels and axles. Use a running stitch to join two pieces of fabric together.	Know that a single fabric shape can be used to make a 3D textiles project. Understand how pneumatic systems (balloons and syringes) create movement.	Understand how to program a computer to monitor/ control their products. Understand how electrical circuits and components can be used to create functional products. Understand how to create strong and stable structures.	Know that a 3D textiles project can be made from a combination of fabric shapes. Understand how mechanical systems (levers and linkages) create movement.	Understand how to program a computer to control their products. Understand how more complex electrical circuits and components can be used to create functional products. Understand how cams create movement. Know how to reinforce/ strengthen a 3D framework.

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Cooking and Nutrition	Where Food Comes From		Know where food comes from.	Know that food is grown, reared and caught in the UK, Europe and the wider world. Know that seasons may affect the food available. Understand how food is processed into ingredients that can be eaten or used in cooking.			
	Food Preparation, Cooking and Nutrition	Prepare simple dishes safely and hygienically, without using a heat source.		How to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source. How to use a range of techniques, such as: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.			
		Know that everyone should eat at least five portions of fruit and vegetables every day. Use techniques such as cutting, slicing and peeling.	Use appropriate equipment to weigh and measure ingredients. Name and sort foods into the five groups of the 'eat well' plate. Use techniques such as slicing and chopping using 'bridge' or 'claw' grip.	Know that a healthy diet is made up from a variety and balance of different foods and drinks, as depicted in the 'eat well' plate. Know that to be active and healthy, food is needed to provide energy for the body. Measure using grams. Follow a recipe.		Know that recipes can be adapted to change the appearance, taste, texture and aroma. Know that different foods contain different substances (nutrients, water and fibre) that are need for health. Understand the need for the correct storage of ingredients. Measure ingredients accurately. Work our ratios in recipes.	
				Use techniques such as chopping, slicing, spreading and baking.	Use techniques such as rolling, cutting mixing and baking.	Use techniques such as chopping, simmering, frying and mixing.	Use techniques such as peeling, grating, chopping, slicing and mixing.

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