Design Technology – Disciplinary Knowledge Progression Map

EYFS Statutory Educational Programme: Expressive Arts and Design:	**National Curriculum Aims:**
The development of children's artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe.	**DESIGN** ● Develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. **MAKE** ● Design and make high-quality prototypes and products for a wide range of users. **EVALUATE** ● Critique, evaluate and test their ideas and products and the work of others **TECHNICAL KNOWLEDGE** ● Build and apply a repertoire of knowledge, understanding and skills. **COOKING AND NUTRITION** ● Understand and apply the principles of nutrition and learn how to cook.

Designing	**EYFS**	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Developing, planning and communicating ideas.	Discuss their work as it progresses. Select materials from a limited range that will meet a simple design criteria e.g. shiny**.** Select tools needed to work the materials e.g. scissors for paper.	Begin to draw on their own experience to help generate ideas and research conducted on criteria. Start to suggest ideas and explain what they are going to do.	Start to generate ideas by drawing on their own and other people's experiences. Develop their ideas through talk and drawings and label parts. Make templates and mock ups of their ideas in card and paper or	With growing confidence generate ideas for an item, considering its purpose and the user/s. When planning explain their choice of materials and components. Put together a step-by-step plan which	Start to generate ideas, considering the purposes for which they are designing- link with Mathematics and Science. Develop a clear idea of what has to be done, planning how to use materials, equipment and

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		Begin to develop their ideas through talk and simple drawings. Communicate with others about how they want to construct their product	using ICT (if relevant) Develop their own ideas from given starting points.	shows the order and also what equipment and tools they need	processes, and suggesting alternative methods of making, if the first attempts fail. Identify the strengths and areas for development in their ideas and products. When planning, consider the views of others (including intended users) to improve their work When planning explain their choice of materials and components according to function and aesthetic. Take account of the ideas of others when designing. Produce a plan and explain it to others Consider how to present their product in an interesting ways.
Making	**EYFS**	**Year 1**	**Year 2**	**Year 3**	**Year 4**

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	Begin to create their own design using basic techniques. Explore and use simple hinges, wheels and axles work using appropriate vocabulary to discuss them. Begin to use scissors to cut straight and curved edges and hole pinches to punch holes. Select the correct basic tools to use such as a saw or hammer and use them correctly. Use appropriate adhesives to join materials.	Begin to make their design using appropriate techniques. Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. Begin to build structures, exploring how they can be made stronger. Begin to assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape. Begin to use simple finishing techniques to improve the appearance of their product. Make a product which moves.	Design and make their product using techniques that are carefully selected. Begin to select tools and materials; use correct vocabulary to name and describe them. Select the best tools and materials for the purpose. Explore basic sewing techniques. Start to choose and use appropriate finishing techniques based on own ideas	Start to think about their designs as they make progress and be willing to change things if this helps them to improve their work. Attempt to make sure that their product looks attractive Create and use simple gears, pulleys, cams, levers and linkages Build models incorporating circuits with buzzers and bulbs. Select the most appropriate tools and techniques to use for a given task. Make choices of material both for its appearance and qualities. Select a wider range of tools and techniques for making their product i.e. construction materials and kits, textiles, food ingredients, mechanical components and electrical components.	Select a wider range of tools and techniques for making their product safely. Start to join and combine materials and components accurately in temporary and permanent ways. Demonstrate how to measure, tape or pin, cut and join fabric with some accuracy. Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT. Measure carefully and show initiative to check so as not to make mistakes Persevere with their product even though their original idea might not have worked Use pulleys, levers and linkages in their product Build a model which incorporates a motor

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				Explain their choice of tools and equipment in relation to the skills and techniques they will be using. Measure, mark out, cut, score and assemble components with more accuracy. Try alternative ways of fixing something if the first attempt is not successful. Make a product which uses both electrical and mechanical components	Use a glue gun with close supervision (one to one)
Evaluating	**EYFS**	**Year 1**	**Year 2**	**Year 3**	**Year 4**
Evaluating processes and products	Say what they like and do not like about items they have made and attempt to say why. Begin to talk about their designs as they develop and identify good and bad points. Start to talk about changes made during the making process. Discuss how closely their finished products meet their design criteria.	Start to evaluate their product by discussing how well it works in relation to the purpose (design criteria). When looking at existing products explain what they like and dislike about the products and why. Begin to evaluate their products as they are developed, identifying strengths and possible changes they might make next time.	Evaluate their work against their design criteria. Look at a range of existing products explain what they like and dislike about products and why. Start to evaluate their products as they are developed, identifying what went well and possible changes they might make next time. With confidence talk about their ideas.	Start to evaluate their product against original design criteria e.g. how well it meets its intended purpose. Suggest some improvements and say what was good and not so good about their original design. Begin to disassemble and evaluate familiar products.	Evaluate their work both during and at the end of the assignment. Evaluate their products carrying out appropriate tests. Be able to disassemble and evaluate familiar products and consider the views of others to improve them. Evaluate how the key designs of individuals in design and technology have helped shape

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				Begin to evaluate some key designs of individuals in design and technology.	the world. Suggest some improvements and say what was good and not so good about their original design Begin to explain how they can improve their original designs Evaluate their product, thinking of both appearance and the way it works.
Food and Nutrition	**EYFS**	**Year 1**	**Year 2**	**Year 3**	**Year 4**
	Explore familiar food products e.g. fruit and vegetables		Demonstrate how to prepare simple dishes safely and hygienically, without using a heat source. Demonstrate how to use techniques such as cutting, peeling and grating Know how to make dishes from other countries		**Measure and weigh ingredients appropriately** Explain why a healthy diet is important