Lyminster Primary School

Design Technology Progression skills

Programme of Study	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	Begin to understand the development of existing products: What they are for, how they work, materials used.	Learn about the development of existing products: what they are for, how they work, materials used.	Begin to learn about and understand how well products have been designed, made, what materials have been used and the construction technique . Identify a purpose and establish criteria for a successful product.	Learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products.	Begin to use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose.	Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose.
	Understand how to identify a target group for what they intend to design and make based on a design criteria.	Identify a purpose for what they intend to design and make. Understand how to identify a target group for what they intend to design and make based on a design criteria.				
	Begin to draw on their own experience to help generate ideas and research conducted on criteria.	Start to generate ideas by drawing on their own and other people's experiences.	With growing confidence generate ideas for an item, considering its purpose and the user/s.	Start to generate ideas, considering the purposes for which they are designing- link with Mathematics and Science.	Start to generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional diagrams, prototypes.	Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces.

Begin to develop their ideas through talk and drawings.	Develop their ideas through talk and drawings (with simple labelled parts).	Begin to explain their choices of materials and components through discussion and labelled drawings	Confidently make labelled drawings from different views showing specific features.	Draw up a specification for their design- link with Mathematics and Science.	Draw up a detailed specification for their design- link with Mathematics and Science.
Start to suggest ideas and explain what they are going to do.	Begin to develop their design ideas through discussion, observation, drawing and modelling.	Order the main stages of making a product.	Develop a clearer idea of what has to be done, planning how to use materials, equipment and processes and being able to explain their choices according to function and aesthetics.	Plan the order of their work and with growing confidence select appropriate materials, tools and techniques.	Plan the order of their work, choosing appropriate materials, tools and techniques.
				Start to understand how much products cost to make, how sustainable and innovative they are and the impact products might have.	Analyse how much products cost to make, how sustainable and innovative they are, the impact products have beyond their intended purpose.
Make templates and mock ups of their ideas in card, paper or using ICT.	Make templates and mock ups of their ideas in card, paper or using ICT.	Make simple prototypes to 'try out' their design.	Make prototypes to help assess and evaluate their original design.		Suggest and try out alternative methods of making if the first attempts fail.
			When planning, consider the views of others, including intended users, to improve their work.	Begin to suggest alternative methods of making, if the first attempts fail.	Identify the strengths and areas for development in their ideas and products.

Make and Technical Knowledge	Begin to make their design using appropriate techniques.	With support, begin to select tools and materials; use correct vocabulary to name and describe them.	Select tools and techniques for making their product.	Select a wider range of tools and techniques for making their product safely.	Select appropriate tools and techniques e.g. cutting, shaping, joining and finishing, more accurately.	Confidently select appropriate tools, materials, components and techniques.
	Explore using tools e.g. scissors and a hole punch safely.	With support, learn to use hand tools safely and appropriately.	Begin to work more independently with simple tools.	Work with a range of tools safely and more accurately.	Work with a wider range of tools safely and accurately.	Confidently use a wide range of tools safely and accurately.
	With support measure, mark out, cut and shape a range of materials.	With help measure, mark out, cut and score with some accuracy. .	Measure, mark out, cut, score and assemble components with more accuracy.	Begin to measure and mark out, cut, score and assemble components with more accuracy.	Know how to measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques.	Confidently measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques.
	With support assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape.	Start to assemble, join and combine materials and components in order to make a product.	Assemble, join and combine materials and components in order to make a product.	Start to join and combine materials and components more accurately in temporary and permanent ways.	Join and combine materials and components accurately in permanent ways, with more independence.	Construct products using permanent joining techniques independently. Assemble components to make working models.
	Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	Demonstrate how to cut, shape and join fabric to make a simple product. Use basic sewing techniques with support.	Begin to understand that mechanical systems such as levers and linkages or pneumatic systems create movement.	Demonstrate how to measure, pin, cut and join fabric with some accuracy. Sew using a range of different stitches.	Understand how mechanical systems such as cams, pulleys or gears create movement. Understand that mechanical and electrical systems have an input, process and output.	More confidently measure, pin, cut and join a range of materials with accuracy. Select and use a range of appropriate stitches.

	Begin to build structures, exploring how they can be made stronger, stiffer and more stable.	**Build** structures, exploring how they can be made stronger, stiffer and more stable	**Start to think** about their ideas as they make progress and be willing to change things if this helps them to improve their work.	**With support, learn how** to reinforce and strengthen a 3D framework.	**Learn and be able to** reinforce and strengthen a 3D framework. **Make changes** as they go to improve their product.	**Know how to** reinforce and strengthen a 3D framework. **Make appropriate changes** as they work to improve their products and **explain their reasons.**
			Know how **simple** electrical circuits and components can be used to create functional products.	**Understand** how **simple** electrical circuits and components can be used to create functional products.	**Know** how **more complex** electrical circuits and components can be used to create functional products and **begin to explore** how to program a computer to monitor changes in the environment.	**Know** how **more complex** electrical circuits and components can be used to create functional products **and how to** program a computer to control their products.
	With support, use simple finishing techniques to improve the appearance of their product.	**Start to** choose and use appropriate finishing techniques.	**Choose and use** a range of finishing techniques **based on their own ideas.**	**Begin to** use finishing techniques to strengthen and improve the appearance of their product **using a range of equipment.**	**Use** finishing techniques to strengthen and improve the appearance of their product **using a range of equipment including ICT.**	**Use** finishing techniques **with a clear purpose** to strengthen and improve the appearance of their product **using a range of equipment including ICT.** Aim to **make and to achieve a quality product.**
Evaluate	**Through discussion, start to** evaluate their product by discussing how well it works in relation to the purpose (design criteria).	**With support and through discussion, simple text** and drawings, evaluate their product against their design criteria.	**Start to** evaluate (through **talk and writing**) their product against original design criteria *e.g. how well it meets its intended purpose*	**Evaluate** their product **carrying out appropriate tests, writing up their findings.**	Through **more detailed writing and drawings, evaluate** their product against the original design specification and by **carrying out tests.**	**Evaluate** their product against their original criteria, **identifying strengths, areas for development, and carrying out appropriate tests.** Record their evaluations using labelled drawings, suggesting how

						they could be improved.
	When looking at existing products **explain** what they like and dislike about products and why.	**Look at a range** of existing products **explain** what they like and dislike about products and why.	**Begin to** disassemble and evaluate familiar products.	**With support**, disassemble and evaluate familiar products and **consider the views of others to improve them.**	**Begin to** disassemble, explore and evaluate products **linked to their own assignment.**	**Disassemble, explore and evaluate** products linked to their own assignment.
			With support, evaluate the key designs of individuals in design and technology that has helped shape the world.	**Begin to evaluate** the key designs of individuals in design and technology that has helped shape the world.	**Evaluate** the key designs of individuals in design and technology that has helped shape the world.	**Evaluate in more depth** the key designs of individuals in design and technology that has helped shape the world.
	Begin to evaluate their products as they are developed, identifying strengths and possible changes they might make.	**Start to** evaluate their products as they are developed, identifying strengths and possible changes they might make. Talk about their ideas, **saying what they like and dislike about them.**	**With support**, evaluate during and at the end of the assignment.	**Start to** evaluate their work both during and at the end of the assignment.	**Evaluate** their work both during and at the end of the assignment. Begin to evaluate it personally and seek evaluation from others.	**Evaluate in more detail** their work both during and at the end of the assignment.
Cooking and Nutrition *This should be integrated into the above strands so that pupils*	**Begin to understand** that all food comes from plants or animals. **Explore the understanding** that food has to be farmed, grown elsewhere (e.g. home) or caught.	**Understand** that all food comes from plants or animals. **Know** that food has to be farmed, grown elsewhere (e.g. home) or caught.	**Start to know** that food is grown, reared and caught in the UK, Europe and the wider world.	**Understand** that food is grown, reared and caught in the UK, Europe and the wider world.	**Understand** that food is grown, reared and caught in the UK, Europe and the wider world. **Begin to understand** that seasons may affect the food available. **Understand** how food is processed into ingredients that can be eaten or used in	**Know** that food is grown, reared and caught in the UK, Europe and the wider world. **Understand** that seasons may affect the food available. **Understand** how food is processed into ingredients that can be eaten or used in

				cooking.	cooking.
still have opportunities to research, design and make, use tools and skills and evaluate for a food based product.	**Start to understand** how to name and sort foods into different groups and that these different groups have different 'jobs' to keep us healthy.	**Understand** how to name and sort foods into groups eg. in 'The Eat well plate' and **know** that everyone needs to eat a range of foods from different groups to keep them healthy.	**Start to understand** that a healthy diet is made up from a variety and balance of different food and drink from the food groups. **Begin to know** that to be active and healthy, food and drink are needed to provide energy for the body.	**Know** that a healthy diet is made up from a variety of food and drink, as depicted in 'The Eat well plate' **Know** that to be active and healthy, food and drink are needed to provide nutrients for the body.	**Begin to understand** that different food and drink contain different substances – nutrients, water and fibre – that are needed for health.	**Know** different food and drink contain different substances – nutrients, water and fibre – that are needed for health.
	Know how to prepare simple dishes safely and hygienically, **without using a heat source with support.**	**Demonstrate** how to prepare simple dishes safely and hygienically, **without using a heat source.**	**Understand** how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, **the use of a heat source with support.**	**Know** how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, **kneading.**	**Know** how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, **the use of a heat source with support.**	**Know** how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, **the use of a heat source.**
	Know how to use techniques such as cutting, peeling and grating **with support.**	**Demonstrate** how to use techniques such as cutting, peeling and grating.	**Begin to understand** how to use a range of techniques such as peeling, **slicing,** grating, **mixing, spreading**.	**Understand** how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, **the use of a heat source with support.**	**Start to understand** how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading, **baking.**	**Understand** how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading, baking and **decorating**.