Progression of Knowledge & Skills in Design Technology

	EYFS	KS1	LKS2
Developing, planning and communicating ideas. (DESIGN)	• Draw on their own experience to help generate ideas • Suggest ideas and explain what they are going to do • Identify a target group for what they intend to design and make • Model their ideas in card and paper	**SKILLS** • Generate ideas by drawing on their own and other people's experiences • Develop their design ideas through discussion, observation, drawing and modelling • Identify a purpose for what they intend to design and make • Identify simple design criteria • Make simple drawings and label parts **KNOWLEDGE** • Children know what a design is and that a design helps to produce a product that is fit for purpose • Children know how to communicate their ideas by producing simples designs	**SKILLS** • Generate ideas, considering the purposes for which they are designing • Identify a purpose and establish criteria for a successful product. • Plan the order of their work before starting • Explore, develop and communicate design proposals by modelling ideas • Make labelled drawings from different views showing specific features • Develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail • Evaluate products and identify criteria that can be used for their own designs **KNOWLEDGE** • Children understand the process of design (starting with a clear purpose and intention, exploring possibilities through design, selecting the most appropriate design) • Children know that design is an important stage in the design, plan, make, evaluate cycle
Working with tools, equipment, materials and components to make quality products (MAKE)	• Make their design using appropriate techniques • With help mark out, cut and shape a range of materials • Use tools *eg scissors and a hole punch* safely • Assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape	**SKILLS** • Begin to select tools and materials; use vocab' to name and describe them • Measure, cut and score with some accuracy • Use hand tools safely and appropriately • Assemble, join and combine materials in order to make a product • Choose and use appropriate finishing techniques **KNOWLEDGE** • Children know the names of the tools/equipment and how to use them safely (hacksaw, vice, hammer,) • Children know how to join and combine materials using (a glue gun, jinx corners, nails) • Children know how to use finishing techniques (sanding, paint and decoration)	**SKILLS** • Select appropriate tools and techniques for making their product • Measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques with more accuracy • Work safely and accurately with a range of simple tools • Join and combine materials and components accurately in temporary and permanent ways • Use finishing techniques strengthen and improve the appearance of their product using a range of equipment including ICT • Explain their choice of materials and components in relation to functional properties and aesthetic qualities **KNOWLEDGE** • Children know the names of the tools/equipment and how to use them safely (drill, screwdriver, bradawl) • Children know how to join and combine materials and when to use specific techniques (mitered corners, drilling and screwing) • Children know how to use finishing techniques (filing, varnishing or glazing)
Evaluating processes and products (EVALUATE)	• Evaluate their product by discussing how well it works in relation to the purpose • Evaluate their products as they are developed, identifying strengths and possible changes they might make	**SKILLS** • Talk about 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 and how they might change this • Make judgements about the extent to which the product resembles the design and is fit for purpose **KNOWLEDGE** • Children know that evaluation is an important part of the design and make process • Children know that evaluation leads to improvement and better products and can give some examples in real life • Children know how to evaluate existing products (what they are, what they are for, how it works and how it is used)	**SKILLS** • Evaluate their work both during and at the end of the assignment • Evaluate their product against original design criteria *e.g. how well it meets its intended purpose* • Disassemble and evaluate familiar products • Evaluate their products carrying out appropriate tests • Consider the views of others to improve their work **KNOWLEDGE** • Children refer to their design criteria as they design and make • Children know how to use their design criteria to evaluate the final product • Children know that evaluation leads to improvement and better products and can give some examples in real life • Children know how to evaluate existing products (how well they've been designed and made, why materials were chosen, what methods of construction were used, how well it works/achieves its purpose/meets a need)

| **Food** | • Select and use appropriate fruit and vegetables, processes and tools
• Use basic food handling, hygienic practices and personal hygiene | SKILLS
• Prepare simple dishes safely and hygienically, without using a heat source.
• Use techniques such as cutting, peeling and grating.

KNOWLEDGE
• Understand that all food comes from plants or animals.
• Know that food has to be farmed, grown elsewhere (e.g. home) or caught.
• Understand how to name and sort foods into the five groups in 'The Eat well plate'
• Know that everyone should eat at least five portions of fruit and vegetables every day.
• Know how to prepare simple dishes safely and hygienically, without using a heat source.
• Know how to use techniques such as cutting, peeling and grating. | SKILLS
• Prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.
• Use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.

KNOWLEDGE
• Understand that 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.
• Know how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.
• Know that a healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The Eat well plate'
• Know that to be active and healthy, food and drink are needed to provide energy for the body. |

Materials	● Cut materials safely using tools provided.	● Cut materials safely using tools provided.
		● Measure and mark out to the nearest centimetre.
		● Use a range of cutting and shaping techniques (such as tearing, cutting, folding and curling).
		● Use a range of joining techniques (such as gluing, hinges or combining materials to strengthen).
		
		KNOWLEDGE
		  ● Children know and recognise a range of materials used in everyday products so they are fit for purpose
			SKILLS
			● Cut materials accurately and safely by selecting appropriate tools.
			● Measure and mark out to the nearest millimetre.
			● Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs).
			● Select appropriate joining techniques/ resources.
			
			KNOWLEDGE
			  ● Children recognise and can identify the different techniques used to create strength, stability, fitness for purpose, versatility

Textiles	● Recognise a range of different textiles and what they could be used for	SKILLS
		● Shape textiles using templates.
		● Join textiles using running stitch.
		● Colour and decorate textiles using a number of techniques (such as adding sequins or printing and cross stitch)
		
		KNOWLEDGE
		  ● Children know that different textiles have different properties and identify these in day to day life
		  ● Children know that a 3-D product can be made from two identical shapes
			SKILLS
			● Join textiles with appropriate stitching.
			● Select the most appropriate techniques to decorate textiles.
			
			KNOWLEDGE
			  ● Children know what properties they have chosen a material for
			  ● Children know that a single fabric shape can be used to make a 3-D product

Mechanics	● Use and explore toys with moving parts	SKILLS
		● Create products using levers, wheels and winding mechanisms.
		
		KNOWLEDGE
		  ● Children know about and recognise the use of a range of mechanisms in the world around us
			SKILLS
			  ● Choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears.)
			
			KNOWLEDGE
			● Children know that there is a transference of force in order that a mechanism works