Progression of Skills in Design Technology

	Key Stage 1	Lower Key Stage 2	Upper Key Stage 2
Design	- Children can design purposeful, functional, appealing products for themselves and other users based on design criteria. - Children can generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. - Children can use their knowledge of existing products and their own experience to help generate their ideas. - Children can design products that have a purpose and are aimed at an intended user. - Children can explain how their products will look and work through talking and simple annotated drawings. - Children can design models using simple computing software. - Children can plan and test ideas using templates and mock-ups. - Children can understand and follow simple design criteria. - Children can work in a range of relevant contexts, for example imaginary, story-based, home, school and the wider environment.	- Children can use research to develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. - Children can generate, develop, model and communicate their ideas through discussion, annotated sketches, prototypes, pattern pieces and computer- aided design. - Children can identify the design features of their products that will appeal to intended customers. - Children can use their knowledge of a range of existing products to help generate their ideas. - Children can design innovative and appealing products that have a clear purpose and are aimed at a specific user. - Children can explain how particular parts of their products work. - Children can use annotated sketches to develop and communicate their ideas. - When designing, children can explore different initial ideas before coming up with a final design. - When planning, children can start to explain their choice of materials and components including function and aesthetics. - Children can test ideas out through using prototypes. - Children can use computer-aided design to develop and communicate their ideas. - Children can develop and follow simple design criteria. - Children can work in a broader range of relevant contexts, for example entertainment, the home, school, leisure, food industry and the wider environment.	- Children can create their own design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. - Children can generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer- aided design. - Children can use research to inform and develop detailed design criteria to inform the design of innovative, functional and appealing products that are fit for purpose and aimed at a target market. - Children can use their knowledge of a broad range of existing products to help generate their ideas. - Children can design products that have a clear purpose and indicate the design features of their products that will appeal to the intended user. - Children can explain in detail how particular parts of their products work. - Children can use annotated sketches, cross-sectional drawings and exploded diagrams (possibly including computer-aided design) to develop and communicate their ideas. - Children can generate a range of design ideas and clearly communicate final designs. - Children can consider the availability and costings of resources when planning out designs. - Children can work in a broad range of relevant contexts, for example conservation, the home, school, leisure, culture, enterprise, industry and the wider environment.
Make	- Children can, with support, follow a simple plan or recipe. - Children can begin to select from a range of hand tools and equipment, such as scissors, graters, zesters, safe knives, juicer.	- With growing confidence, children can carefully select from a range of tools and equipment, explaining their choices. - Children can select from a range of materials and components according to their functional	- With confidence, children can select from a wide range of tools and equipment, explaining their choices. - Children can confidently select from a range of materials and components according to their

	- Children can select from a range of materials, textiles and components according to their characteristics. - Children can use a range of materials and components, including textiles and food ingredients. - With help, children can measure and mark out. - Children can cut, shape and score materials with some accuracy. - Children can assemble, join and combine materials, components or ingredients. - Children can demonstrate how to cut, shape and join fabric to make a simple product. - Children can manipulate fabrics in simple ways to create the desired effect. - Children can use a basic running stitch. - Children can cut, peel and grate ingredients, including measuring and weighing ingredients using measuring cups. - Children can begin to use simple finishing techniques to improve the appearance of their product, such as adding simple decorations.	properties and aesthetic qualities. - Children can place the main stages of making in a systematic order. - Children can use a wider range of materials and components, including construction materials and kits, textiles and mechanical and electrical components. - With growing independence, children can measure and mark out to the nearest cm and millimeter. - Children can cut, shape and score materials with increasing accuracy. - Children can assemble, join and combine material and components with increasing accuracy. - Children demonstrate how to measure, cut, shape and join fabric with some accuracy to make a simple product. - Children can join textiles with an appropriate sewing technique. - Children begin to select and use different and appropriate finishing techniques to improve the appearance of a product such as hemming, tie-dye, fabric paints and digital graphics.	functional properties and aesthetic qualities. - Children can create step-by-step plans as a guide to making. - Children can independently take exact measurements and mark out, to within 1 millimeter. - Children can use a full range of materials and components, including construction materials and kits, textiles, and mechanical components. - Children can confidently cut a range of materials with precision and accuracy. - Children can shape and score materials with precision and accuracy. - Children can assemble, join and combine materials and components with accuracy. - Children can demonstrate how to measure, make a seam allowance, tape, pin, cut, shape and join fabric with precision to make a more complex product. - Children can join textiles using a greater variety of stitches, such as backstitch, whip stitch, blanket stitch. -Children can refine the finish using techniques to improve the appearance of their product, such as sanding or a more precise scissor cut after roughly cutting out a shape.
Evaluate	- Children can explore and evaluate a range of existing products. They evaluate their ideas and products against design criteria. - Children can explore and evaluate existing products mainly through discussions, comparisons and simple written evaluations. - Children can explain positives and things to improve for existing products. - Children can explore what materials products are made from. - Children can talk about their design ideas and what they are making. - As they work, children can start to identify strengths and possible changes they might make to refine their existing design. - Children can evaluate their products and ideas against their simple design criteria. - Children can start to understand that the iterative process sometimes involves repeating different stages of the process.	- Children can investigate and analyse a range of existing products. - Children can evaluate their ideas and products against their own design criteria and improve their work. - Children understand how key events and individuals in design and technology have helped shape the world. - Children can explore and evaluate existing products, explaining the purpose of the product and whether it is designed well to meet the intended purpose. - Children can explore what materials/ingredients products are made from and suggest reasons for this. - Children can consider their design criteria as they make progress and are willing to alter their plans, sometimes considering the views of others if this helps them to improve their product. - Children can evaluate their product against their original design criteria.	- Children investigate and analyse a broad range of existing products. - Children evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. - Children understand how key events and individuals in design and technology have helped shape the world. - Children can complete detailed competitor analysis of other products on the market. - Children can critically evaluate the quality of design, manufacture and fitness for purpose of products as they design and make. - Children can evaluate their ideas and products against the original design criteria, making changes as needed.

Technical Knowledge	- Children can build structures, exploring how they can be made stronger, stiffer and more stable. - Children can explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. - Children can build simple structures, exploring how they can be made stronger, stiffer and more stable. - Children can talk about and start to understand the simple working characteristics of materials and components. - Children can explore and create products using mechanisms, such as levers, sliders and wheels.	- Children can apply their understanding of how to strengthen, stiffen and reinforce more complex structures. - Children can understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages], with support. - Children understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]. - Children apply their understanding of computing to program, monitor and control their products. - Children can- understand that materials have both functional properties and aesthetic qualities. - Children can apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products, with support. - Children understand and demonstrate how mechanical and electrical systems have an input and output process. - Children can make and represent simple electrical circuits, such as a series and parallel, and components to create functional products. - Children can explain how mechanical systems such as levers and linkages create movement. - Children can use mechanical systems in their products.	- Children understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]. - Children apply their understanding of computing to program, monitor and control their products. - Children can apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products. - Children understand and demonstrate that mechanical and electrical systems have an input, process and output. - Children can explain how mechanical systems, such as cams, create movement and use mechanical systems in their products. - Children can apply their understanding of computing to program, monitor and control a product.
Cooking and Nutrition	- Children understand where food comes from. - Children can explain where in the world different foods originate from. - Children understand that all food comes from plants or animals. - Children understand that food has to be farmed, grown elsewhere (e.g. home) or caught. - Children can name and sort foods into the five groups in the Eatwell Guide. - Children understand that everyone should eat at least five portions of fruit and vegetables every day and start to explain why. - Children use what they know about the Eatwell Guide to design and prepare dishes.	- With support, children prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. - Children understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. - Children start to know when, where and how food is grown (such as herbs, tomatoes and strawberries) in the UK, Europe and the wider world. - With support, children understand how to prepare and cook a variety of predominantly savoury dishes safely and hygienically. - With support, children can use a heat source to cook ingredients showing awareness of the need to control the temperature of the hob	- Children prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. - Children know, explain and give examples of food that is grown (such as pears, wheat and potatoes), reared (such as poultry and cattle) and caught (such as fish) in the UK, Europe and the wider world. - Children understand that food is processed into ingredients that can be eaten or used in cooking. - Children can demonstrate how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source. - Children demonstrate how to use a range

		and/or oven. - Children use a range of techniques such as mashing, whisking, crushing, grating, cutting, kneading and baking. - Children can explain that a healthy diet is made up of a variety and balance of different food and drink, as represented in the Eatwell Guide and be able to apply these principles when planning and cooking dishes. - Children understand that to be active and healthy, nutritious food and drink are needed to provide energy for the body. - Children can prepare ingredients using appropriate cooking utensils. - Children can measure and weigh ingredients to the nearest gram and milliliter. - Children start to independently follow a recipe.	of cooking techniques, such as griddling, grilling, frying and boiling. - Children can explain that foods contain different substances, such as protein, that are needed for health and be able to apply these principles when planning and preparing dishes. - Children can adapt and refine recipes by adding or substituting one or more ingredients to change the appearance, taste, texture and aroma. - Children can alter methods, cooking times and/or temperatures. - Children can measure accurately and calculate ratios of ingredients to scale up or down from a recipe. - Children can independently follow a recipe.