

STRATFORD-SUB-CASTLE DESIGN TECHNOLOGY PROGRESSION

	Evaluating existing products	Understanding contexts, users and purposes	Developing, planning and communicating ideas	Practical skills and techniques	Working with tools, equipment, materials and components	Technical knowledge	Evaluating processes and products	Cooking and nutrition
EYFS	Begin to use the language of designing and making, e.g. join, build and shape. -Learning about planning and adapting initial ideas to make them better.			Begin to use the language of designing and making, e.g. join, build and shape. - Learning about planning and adapting initial ideas to make them better.	To learn how to use a range of tools, e.g. scissors, hole punch, stapler, woodworking tools, rolling pins, pastry cutters. -Learn how everyday objects work by dismantling things.		Begin to use the language of designing and making, e.g. join, build and shape. - Learning about planning and adapting initial ideas to make them better.	To learn how to use a range of tools, e.g. scissors, hole punch, stapler, woodworking tools, rolling pins, pastry cutters. -Learn how everyday objects work by dismantling things.
YEAR 1	Across KS1 pupils should explore: • what products are for • who products are for • what products are for • how products work	Across KS1 pupils should: • work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment use information and communication technology, where appropriate, to develop and communicate their ideas	Draw on their own experience to help generate ideas Suggest ideas and explain what they are going to do Describe who/what their products are for and what they intend to design and make Develop their design ideas applying findings from evaluation and research of made products State what products they are designing and making Use simple design criteria to help develop their ideas	Across KS1 pupils should: • follow procedures for safety and hygiene • use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components	Make their design using appropriate techniques With help measure, mark out, cut and shape a range of materials Use tools e.g. 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 Select and use appropriate fruit and vegetables, processes and tools Use basic food handling, hygienic practices and personal hygiene Use simple finishing techniques to improve the appearance of their product	Across KS1 pupils should know: • about the simple working characteristics of materials and components • about the movement of simple mechanisms such as levers, sliders, wheels and axles • how freestanding structures can be made stronger, stiffer and more stable • that a 3-D textiles product can be assembled from two identical fabric shapes • that food ingredients should be combined according to their sensory characteristics • the correct technical vocabulary for the projects they are undertaking	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. Evaluate their product by asking questions about what they have made and how they have gone about it.	Across KS1 pupils should know: • that all food comes from plants or animals • that food has to be farmed, grown elsewhere (e.g. home) or caught how to name and sort foods into the five groups in The eatwell plate • that everyone should eat at least five portions of fruit and vegetables every day • how to prepare simple dishes safely and hygienically, without using a heat source • how to use techniques such as cutting, peeling and grating
YEAR 2	• how products are used • where products might be used • what materials products are made from • what they like and dislike about products		Generate ideas by drawing on their own and other people's experiences Develop their design ideas through discussion, observation , drawing, mock ups, construction kits and modelling. Identify a purpose for what they intend to design and make. Identify simple design criteria. Make simple drawings and label parts. State what products they are designing and making. Say how their products will work. Describe what their products are for .Use simple design criteria to help develop their idea		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. Cut, shape and join fabric to make a simple garment. Use basic sewing techniques Follow safe procedures for food safety and hygiene. Choose and use appropriate finishing techniques		Evaluate against their design criteria. 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.	

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YEAR 3	<p>Across KS2 children should explore:</p> <p>about inventors, designers, engineers, chefs and manufacturers who have developed groundbreaking products. How well products have been designed</p> <ul style="list-style-type: none"> • how well products have been made • why materials have been chosen • what methods of construction have been used • how well products work • how well products achieve their purposes • how well products meet user needs and wants • who designed 	<p>Across KS2 pupils should:</p> <p>work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment. Share and clarify ideas through discussion. Use computer-aided design to develop and communicate their ideas</p>	<p>Generate ideas for an item considering its purpose and the user/s 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 drawings with labels when designing. Begin to gather information about the needs and wants of particular individuals and groups</p>	<p>Across KS2 pupils should: follow procedures for safety and hygiene</p> <ul style="list-style-type: none"> • use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components 	<p>Select tools and techniques for making their product. Measure, mark out, cut, score and assemble components with more accuracy. Work safely and accurately with a range of simple tools. Think about their ideas as they make progress and be willing change things if this helps them improve their work. Measure, tape or pin, cut and join fabric with some accuracy. Demonstrate hygienic food preparation and storage. Use finishing techniques strengthen and improve the appearance of their product using a range of equipment including ICT.</p>	<p>Across KS2 pupils should know:</p> <ul style="list-style-type: none"> • how to use learning from science to help design and make products that work • how to use learning from mathematics to help design and make products that work • that materials have both functional properties and aesthetic qualities • that materials can be combined and mixed to create more useful characteristics • that mechanical and electrical systems have an input, process and output • the correct technical vocabulary for the projects they are undertaking <p>In early KS2 pupils should also know:</p> <ul style="list-style-type: none"> • how mechanical systems such as levers and linkages or pneumatic systems create movement • how simple electrical circuits 	<p>Evaluate their product against original design criteria e.g. how well it meets its intended purpose Disassemble and evaluate familiar products</p>	<p>Across KS2 pupils should know:</p> <ul style="list-style-type: none"> • 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 In early • that a healthy diet is made up from a variety and balance of different food and drink, as depicted in The eatwell plate • that to be active and healthy, food and drink are needed to provide energy for the body <p>In late KS2 pupils should also know:</p> <ul style="list-style-type: none"> • that seasons may affect the food available • how food is processed into ingredients that can be eaten or used in cooking how to prepare and cook a variety of predominantly savoury dishes safely and
YEAR 4			<p>Generating ideas considering the purposes for which they are designing. 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, developing their own design criteria and use these to inform their ideas. Gather information about the needs and wants of particular individuals and groups. Generate realistic ideas, focusing on the needs of the user. Make design decisions that take account of the availability of resources</p>		<p>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. Join and combine materials and components accurately in temporary and permanent ways. Sew using a range of different stitches, weave and knit. Measure, tape or pin, cut and join fabric with some accuracy. Use simple graphical communication techniques</p>		<p>Evaluate their work both during and at the end of the assignment Evaluate their products carrying out appropriate tests</p>	

<p>YEAR 5</p>	<p>and made the products</p> <ul style="list-style-type: none"> • where products were designed and made • when products were designed and made • whether products can be recycled or reused <p>In late KS2 pupils should also investigate and analyse</p>	<p>See previous page</p>	<p>Generate ideas through brainstorming and identify a purpose for their product. Draw up a specification for their design. 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. Use results of investigations, information sources, including ICT when developing design ideas. Begin to carry out research, using surveys, interviews, questionnaires and web-based resources.</p>	<p>See previous page</p>	<p>Select appropriate materials, tools and techniques Measure and mark out accurately. Use skills in using different tools and equipment safely and accurately. Weigh and measure accurately (time, dry ingredients, liquids). Apply the rules for basic food hygiene and other safe practices e.g. hazards relating to the use of ovens. Cut and join with accuracy to ensure a good-quality finish to the product.</p>	<p>and components can be used to create functional products</p> <ul style="list-style-type: none"> • how to program a computer to control their products • how to make strong, stiff shell structures • that a single fabric shape can be used to make a 3D textiles product • that food ingredients can be fresh, pre-cooked and processed 	<p>Evaluate a product against the original design specification. Evaluate it personally and seek evaluation from others.</p>	<p>hygienically including, where appropriate, the use of a heat source</p> <ul style="list-style-type: none"> • how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking that recipes can be adapted to change the appearance, taste, texture and aroma • that different food and drink contain different substances – nutrients, water and fibre –that are needed for health
<p>YEAR 6</p>	<p>should also investigate and analyse</p> <ul style="list-style-type: none"> • how much products cost to make • how innovative products are • how sustainable the materials in products are • what impact products have beyond their intended purpose 		<p>Communicate ideas through detailed labelled drawings. Develop a design specification. Explore, develop and communicate aspects of their design proposals by modelling their ideas in a variety of ways. Plan the order of their work, choosing appropriate materials, tools and techniques. Carry out research, using surveys, interviews, questionnaires and web-based resource. Identify the needs, wants, preferences and values of particular individuals and groups. Develop a simple design specification to guide their thinking. Generate innovative ideas, drawing on research. Make design decisions, taking account of constraints such as time, resources and cost.</p>		<p>Select appropriate tools materials, components and techniques. Assemble components make working models Use tools safely and accurately. Construct products using permanent joining techniques. Make modifications as they go along Pin, sew and stitch materials together create a product. Achieve a quality products.</p>	<p>In late KS2 pupils should also know:</p> <ul style="list-style-type: none"> • how mechanical systems such as cams or pulleys or gears create movement • how more complex electrical circuits and components can be used to create functional products • how to program a computer to monitor changes in the environment and control their products • how to reinforce and strengthen a 3D framework • that a 3D textiles product can be made from a combination of fabric shapes • that a recipe can be adapted by adding or substituting one or more ingredients 	<p>Evaluate their products identifying strengths and areas for development, and carrying out appropriate tests. Record their evaluations using drawings with labels. Evaluate against their original criteria and suggest ways that their product could be improved.</p>	<p>See previous page too</p>