

Design and Technology Curriculum Map (with Key Knowledge)

Term	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn 1	<p>All About Me</p> <p>I know how to construct with materials.</p> <p>I know how to join pieces together.</p> <p>I know to use tools for a purpose.</p>	No topic this half term	<p>Healthy Fruit Snack (Focus - Cooking and Nutrition)</p> <p>Designing:</p> <p>I can say what healthy fruit salad product I am making and for which user, I can say how I will make it suitable for the user and draw upon my own experiences and knowledge of existing products to help me come up with design ideas.</p> <p>Making:</p> <p>I can follow procedures for hygiene for food preparation, I can select from a range of tools and equipment, I'm beginning to explain my choices and use a range of hand tools carefully to chop, grate and peel fruit. I can join food ingredients according to sensory characteristics and know where different fruits come from.</p> <p>Evaluating:</p> <p>I can identify an existing product, say who the intended user is and describe how a product might be used. I can suggest how my healthy fruit salad product might be improved.</p>	<p>'Healthy Cereal Bars' (Focus - Cooking and Nutrition)</p> <p>Designing:</p> <p>I can work confidently within a range of contexts such as home, school, leisure, culture, enterprise industry and the wider environment and can gather information about the needs and wants of individuals and groups. I can share and clarify my design ideas through discussion and model my ideas using prototypes.</p> <p>Making:</p> <p>I can select suitable tools and equipment for the task, combine food ingredients to make a suitable product using a range of techniques (such as chopping, slicing, mixing and spreading) and following procedures for safety and hygiene. I can make strong, stiff, shell structures (food packaging) and apply a range of finishing techniques.</p> <p>Evaluating:</p> <p>I can investigate and analyse how well existing products have been designed, how well products have been made and how well products meet</p>	No topic this half term	No topic this half term	No topic this half term

				user needs and wants. I can identify the strengths and areas for development in my ideas and my own products.			
Au tu mn 2	Light and Dark I know how to create representations of people, objects and things. I know how to manipulate materials. I know to think of a planned result.	'Playground Structures' (Focus - Exploring Structures) Designing: I can work confidently within a range of familiar contexts (such as story-based, home, school, playgrounds etc.), know what a product is, can say what playground product I am making and generate design ideas by drawing upon my own experiences and from existing products. Making: I can talk about my design ideas, by explaining how I am going to make my playground product, can use simple tools safely, joining materials and components in simple ways. Technical Knowledge:	No topic this half term	No topic this half term	'WW2 in Nottingham Air Raid Shelters' (Focus: Wooden Frame Structures) Designing: I can describe the purpose of my WW2 Air Raid Shelter and describe how some parts of my product work. I share and clarify my design ideas through discussion and use of annotated sketches and cross-sectional drawings to communicate my ideas. Making: I can use a wider range of materials and components and explain my choice of materials and components according to functional and aesthetic qualities. I can measure, mark out and shape materials and components and know how to reinforce and strengthen 3D frameworks. Evaluating: I can investigate and analyse how well existing products have been made and what methods of construction have been used. I can identify the	'Moving Animal Toys' (Focus: Mechanical Systems - Cams) Designing: I can work within a range of contexts, describe the purpose of my moving animal toy product and indicate design features that will appeal to intended users. I can share and clarify my design ideas through discussion and use annotated sketches, cross-sectional drawings and exploded diagrams to communicate and develop my ideas. I can model my ideas using prototypes. Making: I can select materials and components, tools and equipment suitable for the task and explain my choices in relation to the skills and techniques I will be using and according to functional and aesthetic qualities, including how cams, pulleys or gears create movement. I can accurately measure, mark out, cut, assemble, join and combine materials and apply a range of finishing techniques. Evaluating: I can investigate and analyse how well existing	'Brazilian Cheese Breads' (Focus - Cooking/Nutrition) Designing: I can work confidently within a range of contexts such as home, school, leisure, culture, enterprise, industry and the wider environment. I can share and clarify my design ideas through discussion. Making: Planning I can select tools and equipment I will need to make my product and produce appropriate lists of what I will need. I can prepare and cook predominantly savoury dishes safely and hygienically, including where appropriate the use of a heat source. I can adapt a recipe by adding/substituting more than one ingredient and I can use my maths skills to help me design and make products using accurate measurements. Evaluating: I can investigate and analyse how well existing products have been designed and made, know

		I know about the simple working characteristics of materials and components and know how to make freestanding structures stronger, stiffer and more stable.			strengths and areas for development in my own ideas and my own products.	products have been designed and made and why materials have been chosen. I can identify the strengths and areas for development in my ideas and my own products.	about some chefs and manufacturers that have developed existing products. I can identify the strengths and areas for development in my own ideas and my own products. I can consider the views of others including intended users, to improve my work, on my own and with my peers.
Spring 1	Our Heroes I know how to create representations of people, objects and things. I know to think about my work before I construct. I know to use tools appropriately.	No topic this half term	No topic this half term	No topic this half term	No topic this half term	No topic this half term	Savoury Foods (Focus: Cooking/Nutrition) Designing: I can describe the purpose of my product, indicate design features that will appeal to users. I can carry out research using surveys, interviews, questionnaires and web-based resources and use this to generate innovative ideas. Making: I can explain my choice of tools and equipment in relation to the skills and techniques I will be using and use techniques that involve a number of steps. I know that food is grown, reared and caught in the UK, Europe and the wider world. I can use a range of techniques

							<p>including peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p> <p>Evaluating: I can investigate and analyse how well existing products achieve their purposes, how well products achieve their purpose and how innovative products are. I can critically evaluate the quality of the design, manufacture and fitness for purpose of my own product as I design and make.</p>
<p>S pr in g 2</p>	<p>Growing and Changing I know to use appropriate resources. I know to adapt my work as I complete the activity. I know to think about the uses of materials.</p>	<p>'Healthy Flapjacks' (Focus - Cooking and Nutrition) Designing: I can describe what my product is for and I'm beginning to describe how it will work. I can develop and communicate my ideas by talking about them and drawing pictures to make a plan. Making: I can prepare a simple dish safely and hygienically (without using a heat source),</p>	<p>Vehicles (Focus - Mechanisms: Wheels and Axles) Designing: I can say how my product will work and use simple design criteria to help me develop my design ideas, using talk, pictures and words. Making: I can plan how to make my vehicle by suggesting what to do next. I can assemble, join and combine materials and components in</p>	<p>Cushions (Focus: Textiles) Designing: I can tell you about the purpose of my product and use annotated sketches to communicate my ideas. I can model my ideas using prototypes and pattern pieces. Making: I can tell you the order of the main stages of making my product and measure, mark out, cut and shape materials and components with some accuracy, making</p>	<p>'Electrical Torches' (Focus: Use of Electrical Systems) Designing: I can develop my own design criteria and use these to inform my ideas. I can use computer-aided design to help me develop and communicate ideas. I can use my science and my maths skills to help me design and make products that work (using accurate measurements). Making: I can select materials and components for a task and produce appropriate lists of tools and materials that I will need.</p>	<p>Control Technology, including fairground ride (Focus: Mechanisms & Electrical Control) Designing: I can use computer-aided design to help me develop and communicate ideas and I can explain how particular parts of my product work. Making: I know that mechanical/electrical components have an input, process and an</p>	<p>No topic this half term</p>

		<p>can choose from a simple range of tools and equipment, can peel, cut and grate food safely, join food ingredients according to sensory characteristics and think of ways to decorate food I have made.</p> <p>Evaluating: I can say who an existing product is for, what a simple product is for, what a product might be made from and I am beginning to make suggestions about how my own product might be improved.</p>	<p>different ways, know how to make framework structures stronger, stiffer and more stable and know about the movement of simple axles and wheels (using the vocabulary axle, chassis, jinx frame).</p> <p>Evaluating: I can describe how a simple product might work or where it might be used. I can make simple judgements about my vehicle (product) and ideas against my design criteria.</p>	<p>a 3D textile product from a single fabric shape.</p> <p>Evaluating: I can investigate and analyse why materials have been chosen to make existing products, how well products work and how well products achieve their purpose. I can refer to my design criteria as I design and make.</p>	<p>I can assemble, join and combine materials and components with some accuracy. I can apply finishing techniques, including those from art and design.</p> <p>Evaluating: I can investigate and analyse how well existing products have been made, why materials have been chosen, how well products work and how well products meet the user needs and wants. I can refer to my design criteria as I design and make my own product.</p>	<p>output and I know how to program a computer to simulate and control products.</p> <p>Evaluating: I can investigate and analyse what methods of construction have been used in an existing product, how well products work, how well they achieve their purpose and meet user needs and wants. I can consider the views of others, including intended users, to improve my work.</p>	
Summer 1	<p>Hot and Cold I can use tools for a purpose. I know to adapt to different tools for the technique they require. I know how to manipulate materials. I know how to use a variety of materials.</p>	<p>'Moving Pictures' (Focus - Mechanical sliders within a picture) Designing: I can say whether my product is for myself or another user and can explore and use materials to develop my design ideas. Making: I can choose suitable materials for making</p>	No topic this half term	No topic this half term	No topic this half term	No topic this half term	No topic this half term

	<p>I know about the function of some materials.</p> <p>my product, cut materials using scissors, know about the movement of simple levers and sliders and use some simple finishing techniques from art and design.</p> <p>Evaluating: I can say what I like and dislike about an existing product and I can say what I like and dislike about my own product.</p>						
Summer 2	<p>Seaside I know how to design for a purpose. I know about the texture of some different materials. I know about the function of different tools. I know about the use of colour for objects. I know how to stick materials together.</p>	<p>No topic this half term</p>	<p>'Hand Puppets' (Focus: Textiles) Designing: I can work confidently within a wider range of familiar contexts (such as imaginary, story-based, home or school). I can model ideas by exploring materials, components, templates, mock ups etc. and use ICT to communicate my ideas. Making: I can make a product, selecting from a range of materials and components according to their characteristics. I can</p>	<p>'Egyptian Storyboard' (Focus: Mechanical systems, levers and linkages) Designing: I can tell you how some parts of my Egyptian Storyboard will work, and I can develop my own design criteria and use these to inform my ideas. I can generate realistic ideas focussing on the needs of the user. Making: I can select materials and components suitable for the task and I can assemble, join and combine materials and</p>	<p>'African Fruit Sundae' Focus: Cooking/Nutrition Designing: I can gather information about the needs and wants of individuals/groups. I can generate realistic ideas focussing on the needs of the user, make design decisions that take account of the availability of resources and know that the seasons can affect the fruit available grown in the UK, Europe and the wider world. Making: I can select tools and equipment suitable for the task and follow procedures for safety and hygiene. I can</p>	<p>'Savoury Food from either Germany, Cuba and Syria' (Focus: Cooking and Nutrition) Designing: I can carry out research using surveys, interviews, questionnaires and web-based resources to identify the needs, wants, preferences and values of particular individuals and groups and generate innovative ideas drawing on this research. I can make design decisions, taking account of constraints such as time, resources and cost. Making: I know how to prepare and cook savoury dishes safely and hygienically and can use a range of techniques such as peeling, chopping, slicing, grating, mixing, kneading and</p>	<p>'Controllable Toy Vehicles' (Focus: Mechanical and Electrical systems, including programming) Designing: I can explain how particular parts of my Controllable Toy Vehicle product work, can identify the needs, wants, preferences and values of particular individuals or groups and develop a simple design specification to guide my thinking. I can use annotated sketches, cross-sectional drawings and exploded diagrams to communicate and develop my ideas. Making: I can explain my choice of materials and components according to functional and aesthetic qualities and I can formulate step-by-step plans as a guide to making.</p>

			<p>measure, mark out cut and combine two identical textile shapes to make a 3D product.</p> <p>Evaluating: I can identify the materials used to make an existing product and I can say what I like/dislike about a product.</p>	<p>components with some accuracy. I know how mechanical systems such as levers and linkages work.</p> <p>Evaluating: I can investigate and analyse what methods of construction have been used in an existing product and I know that materials have functional and aesthetic qualities. I can refer to my design criteria as I design and make.</p>	<p>combine food ingredients to make a suitable product, using a range of techniques such as peeling, chopping, slicing and mixing and recognise food products that are fresh, pre-cooked or processed.</p> <p>Evaluating: I can investigate and analyse who designed and made existing products, where products were designed and made and how well the products achieve their purposes. I can consider the views of others, including intended users, to improve my own work.</p>	<p>baking. I can produce appropriate lists of the tools and materials I will need and formulate step-by-step plans as a guide to making. I can adapt a recipe by adding/substituting more than one ingredient. I can use my maths skills to help me to design and make products with accurate measurements.</p> <p>Evaluating: I know about some chefs and manufacturers that have developed ground-breaking products. I can evaluate the quality of the design, manufacture and fitness for purpose of my own product as I design and make.</p>	<p>I can accurately measure, mark, cut, shape, assemble, join and combine materials and components and apply a range of finishing techniques. I can use my science skills to help me design and make products that work, use gears and pulleys driven by electrical components to create a moving product.</p> <p>Evaluating: I can investigate and evaluate the methods of construction of existing products, why materials have been chosen, how well products work and meet the user needs and wants. I can evaluate my design and Controllable Toy Vehicle product against original design specification.</p>
--	--	--	--	---	---	---	--