



**Design and Technology  
Progression of Knowledge and Skills  
2020-2021**

	Designing	Making	Evaluating	Technical Knowledge	Cooking and Nutrition
<b>EYFS</b>					
Range of cooking for a purpose	<p>Explore different types of food and talk about the ingredients they like and dislike</p> <p>Choose their own topping and filling for simple recipes and give reasons for their choices</p>	<p>Follow simple instructions to make simple recipes</p>	<p>Talk about likes and dislikes</p>	<p>Learn how to: Chop Grate Mix Spread Knead</p>	<p>Talk about different types of food/food groups</p> <p>Explore the taste and texture of different food</p> <p>Understand simple safety and hygiene rules when preparing food</p>
A chair for Baby Bear	<p>Look carefully at different chairs for different purposes. Talk about and draw a chair design explaining</p>	<p>Use simple joining techniques to join materials</p> <p>Pick suitable</p>	<p>Explain what Baby Bear would like the chair they designed</p>	<p>Use a range of joining techniques - glue, sellotape, staples</p>	

	what they have chosen certain aspects	materials to create the chair  Use a range of construction toys to create prototypes for their design			
3 bears picnic blanket (Link to KU - sustainability)	Explore a range of materials suitable for a picnic blanket  Design a picnic blanket, choosing an appropriate material for a purpose  Explain the material choice	Explore how fabrics can be joined  Choose the most effective joining technique	Talk about what they like about the blanket and what could be improved	Explore a range of techniques to join fabric - gluing, weaving, stapling, sewing	
Let's look at Hats (Hamilton's Hats)	Explore a range of hats and the materials they are made with.  Design a hat for a purpose	Use different materials to create their own hat, explaining about the choices they have made	Talk about what they like best about their hat Talk about why they like it Explain why it would be a good hat	Explore a range of techniques to join fabric - gluing, weaving, stapling, sewing	
Make a flap book/picture	Look at a range of flap books and pictures  Explore how they work  Design their very own flap book/picture	Create a picture and carefully apply a flap using appropriate joining techniques	Share their picture/book with the class and collect opinions.  Talk about what they like about their picture	Measure Cut Stick	

**Year 1**

<p><b>Food and Nutrition</b>  Making fruit kebabs and Healthy smoothies  <i>(in line with Orchard exploration and apple week)</i></p>	<p>Use simple design criteria to help develop their ideas  Describe what their products are for  Say how they will make their products suitable for their intended users  Develop and communicate ideas by talking and drawing</p>	<p>Follow procedures for safety and hygiene  Use simple utensils and equipment to peel, cut, squeeze, grate and chop safely</p>	<p>Talk about their design ideas and what they are making  Make simple judgements about their products and ideas against design criteria  Suggest how their products could be improved</p>	<p>That food ingredients should be combined according to their sensory characteristics</p>	<p>That all food comes from plants or animals  That food has to be farmed, grown elsewhere (e.g. home) or caught  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</p>
<p><b>Structures</b>  Designing their own 3D, free standing 'Grand Design' for a specific purpose  <i>(link to Geography and Science topic)</i></p>	<p>Work confidently in a range of contexts - local area  Describe what their products are for  Say how their products will work  Say how they will make their products suitable for their intended users  Use simple design criteria to help develop their ideas  Generate ideas by drawing on their own experiences</p>	<p>Select from a range of materials and components according to their characteristics  Assemble, join and combine materials and components</p>	<p>Talk about their design ideas and what they are making  Make simple judgements about their products and ideas against design criteria  Suggest how their products could be improved  Evaluate what materials products are made from</p>	<p>About the simple working characteristics of materials and components  How freestanding structures can be made stronger, stiffer and more stable</p>	

	Use knowledge of existing products to help come up with ideas Develop and Communicate ideas by talking and drawing model ideas by exploring materials, components and construction kits and by making templates and mock- ups				
<b>Mechanisms</b> Create a moving picture (linked to Science and PSHE)	Say how their products will work Say how they will make their products suitable for their intended users Use simple design criteria to help develop their ideas	Plan by suggesting what to do next Select from a range of tools and equipment, explaining their choices Measure, mark out, cut and shape materials and components	Make simple judgements about their products and ideas against design criteria Suggest how their products could be improved	About the simple working characteristics of materials and components About the movement of simple mechanisms such as levers, sliders, wheels and axles	
<b>Year 2</b>					
<b>Food and Nutrition</b> Design a healthy sandwich/lunch for the Lighthouse Keeper (Links to PSHE, Science and Literacy)	State what products they are designing and making Say whether their products are for themselves or other users Say how they will make their products suitable for their intended users Use simple design criteria to help develop	follow procedures for safety and hygiene	Talk about their design ideas and what they are making Make simple judgements about their products and ideas against design criteria Suggest how their products could be improved	That food ingredients should be combined according to their sensory characteristics	How to name and sort foods into the five groups in the Eatwell Guide  How to prepare simple dishes safely and hygienically, without using a heat source How to use

	their ideas		What they like and dislike about products		techniques such as cutting, peeling and grating
<b>Textiles</b> Design a hand puppet character suitable for a Punch and Judy show	Say how they will make their products suitable for their intended users generate ideas by drawing on their own experiences Use knowledge of existing products to help come up with ideas Develop and communicate ideas by talking and drawing Making templates and mock- ups	Select from a range of materials and components according to their characteristics Use a range of materials for the purpose Assemble, join and combine materials and components Use finishing techniques, including those from art and design	Talk about their design ideas and what they are making Make simple judgements about their products and ideas against design criteria Suggest how their products could be improved Explore what materials products are made from Explore what they like and dislike about products	That a 3-D textiles product can be assembled from two identical fabric shapes	
<b>Mechanisms</b> Design a moving space vehicle with working wheels and axles <i>(Links to History)</i>	Describe what their products are for Say how their products will work Say how they will make their products suitable for their intended users Use simple design criteria to help develop their ideas Use knowledge of existing products to help come up with ideas Develop and communicate ideas by	Select from a range of tools and equipment, explaining their choices Select from a range of materials and components according to their characteristics Measure, mark out, cut and shape materials and components Assemble, join and	Talk about their design ideas and what they are making Make simple judgements about their products and ideas against design criteria Suggest how their products could be improved  Explore: what products are	About the movement of simple mechanisms such as levers, sliders, wheels and axles The correct technical vocabulary for the projects they are undertaking	

	<p>talking and drawing</p> <p>Model ideas by exploring materials, components and construction kits and by making templates and mock- ups</p> <p>Use information and communication technology, where appropriate, to develop and communicate their ideas</p>	<p>combine materials and components</p> <p>Use finishing techniques, including those from art and design</p>	<p>Who products are for</p> <p>What products are for</p> <p>How products work</p> <p>How products are used</p> <p>Where products might be used</p> <p>What materials products are made from</p> <p>What they like and dislike about products</p>		
--	---	--	--	--	--

**Year 3**

<p><b>Food and Nutrition</b></p> <p>Design and make a nutritious snack to provide energy, using fair trade ingredients <i>(Links to Geography and Science, PSHE)</i></p>	<p>Gather information about the needs and wants of particular individuals and groups</p> <p>Develop their own design criteria and use these to inform their ideas</p> <p>Generate realistic ideas, focusing on the needs of the user</p>	<p>Follow procedures for safety and hygiene</p> <p>Use a wider range of materials and components than KS1, including food ingredients</p>	<p>Identify the strengths and areas for development in their ideas and products</p> <p>Consider the views of others, including intended users, to improve their work</p> <p>Use their design criteria to evaluate their completed products</p> <p>Evaluate how well products have been made</p> <p>Evaluate how well products meet user needs and wants</p> <p>Evaluate/learn about current products and chefs</p>	<p>How to use learning from science to help design and make products that work</p> <p>How to use learning from mathematics to help design and make products that work</p> <p>That food ingredients can be fresh, pre-cooked and processed</p> <p>That a recipe can be adapted by adding or substituting one or more ingredients</p> <p>That food ingredients can be fresh, pre-cooked and processed</p>	<p>That a recipe can be adapted a by adding or substituting one or more ingredients</p> <p>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</p> <p>How to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where</p>
--	--	---	--	---	--

					<p>appropriate, the use of a heat source</p> <p>How to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking</p> <p>That a healthy diet is made up from a variety and balance of different food and drink, as depicted in the Eatwell Guide</p> <p>That to be active and healthy, food and drink are needed to provide energy for the body</p>
<p><b>Textiles</b> Design and make Christmas Decorations - using weaving techniques</p>	<p>Gather information about the needs and wants of particular individuals and groups</p> <p>Develop their own design criteria and use these to inform their ideas</p> <p>Generate realistic ideas, focusing on the needs of the user</p> <p>Make design decisions that take account of the availability of resources</p> <p>Model their ideas using</p>	<p>Measure, mark out, cut and shape materials and components with some accuracy</p> <p>Assemble, join and combine materials and components with some accuracy</p> <p>Apply a range of finishing techniques, including those from art and design, with some accuracy</p>	<p>Consider the views of others, including intended users, to improve their work</p> <p>Refer to their design criteria as they design and make</p> <p>Use their design criteria to evaluate their completed products</p>	<p>That materials have both functional properties and aesthetic qualities</p> <p>That materials can be combined and mixed to create more useful characteristics</p> <p>That a single fabric shape can be used to make a 3D textiles product</p>	

	prototypes and pattern pieces				
<b>Pneumatics</b> Create a moving, mythical monster. <i>(Links to Literacy and History)</i>	Explain how particular parts of their products work Make design decisions that take account of the availability of resources	Select tools and equipment suitable for the task Explain their choice of tools and equipment in relation to the skills and techniques they will be using Select materials and components suitable for the task Explain their choice of materials and components according to functional properties and aesthetic qualities Measure, mark out, cut and shape materials and components with some accuracy	Refer to their design criteria as they design and make Use their design criteria to evaluate their completed products	How to use learning from science to help design and make products that work How pneumatic systems create movement	
<b>Year 4</b>					
<b>Food and Nutrition</b> Create WW2 recipes (scones, carrot cake, vegetable soup) - link to dig for victory	Gather information about the needs and wants of particular individuals and groups Develop their own design criteria and use these to inform their ideas Explain how particular	Follow procedures for safety and hygiene  Use a wider range of food ingredients,	Identify the strengths and areas for development in their ideas and products Consider the views of others, including intended users, to improve their work	How to use learning from science to help design and make products that work  That food ingredients can be fresh, pre-cooked and processed	That a recipe can be adapted a by adding or substituting one or more ingredients That food is grown (such as tomatoes, wheat and potatoes), reared

	parts of their products work				(such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world How to prepare and cook a variety of predominantly savoury dishes Safely and hygienically including, where appropriate, the Use of a heat source How to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking That a healthy diet is made up from a variety and balance of different food and drink, as depicted in the Eatwell Guide
<b>Textiles</b> Design and make a bag for a specific purpose	Indicate the design features of their products that will appeal to intended users Carry out research, using surveys, interviews,	Select materials and components suitable for the task Explain their choice of materials according to functional properties	Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make	That materials have both functional properties and aesthetic qualities  That materials can be combined and	

		<p>questionnaires and web-based resources</p> <p>Identify the needs, wants, preferences and values of particular individuals and groups</p> <p>Develop a simple design specification to guide their thinking</p>	<p>and aesthetic qualities</p> <p>Measure, mark out, cut and shape materials and components with some accuracy</p> <p>Assemble, join and combine materials and components with some accuracy</p> <p>Apply a range of finishing techniques, including those from art and design, with some accuracy</p>	<p>Evaluate existing products:</p> <p>How well products have been designed</p> <p>How well products have been made</p> <p>Why materials have been chosen</p> <p>Who designed and made the products</p> <p>Where products were designed and made</p> <p>When products were designed and made</p> <p>Whether products can be recycled or reused</p>	<p>mixed to create more useful characteristics</p> <p>That a single fabric shape can be used to make a 3D textiles product</p> <p>That a 3D textiles product can be made from a combination of fabric shapes</p>	
<p>Linked topic</p>	<p><b>Structures</b></p> <p>Design and make a strong bridge to cross the River Tyne</p>	<p>Explain how particular parts of their products work</p> <p>Model their ideas using prototypes and pattern pieces</p> <p>Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas</p> <p>Use computer-aided design to develop and communicate their ideas</p>	<p>Select tools and equipment suitable for the task</p> <p>Explain their choice of tools and equipment in relation to the skills and techniques they will be using</p> <p>Select materials and components suitable for the task</p> <p>Order the main stages of making</p> <p>Use a wider range of materials and components than KS1, including construction</p>	<p>Identify the strengths and areas for development in their ideas and products</p> <p>Consider the views of others, including intended users, to improve their work</p> <p>Refer to their design criteria as they design and make</p> <p>Evaluate</p> <p>How well products have been designed</p> <p>How well products have been made</p> <p>Why materials have</p>	<p>How to use learning from mathematics to help design and make products that work</p> <p>How to make strong, stiff shell structures</p>	

			<p>materials and kits, mechanical components and electrical components</p> <p>Measure, mark out, cut and shape materials and components with some accuracy</p> <p>Assemble, join and combine materials and components with some accuracy</p>	<p>been chosen</p> <p>What methods of construction have been used</p> <p>How well products work</p> <p>How well products achieve their purposes</p> <p>How well products meet user needs and wants</p> <p>Who designed and made the products</p> <p>Where products were designed and made</p> <p>When products were designed and made</p> <p>Research: About inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products</p>		
	<p><b>Mechanical Systems</b> Create a moving bridge</p>				<p>How mechanical systems such as levers and linkages or pneumatic systems create movement</p>	
	<p><b>Electrical Systems</b> Create a moving bridge/lighting warning</p>				<p>How to use learning from science to help design and make</p>	

	<p>system</p> <p>Construct a working fairground following design instructions</p>				<p>products that work</p> <p>That mechanical and electrical systems have an input, process and output</p> <p>How simple electrical circuits and components can be used to create functional products</p>	
--	---	--	--	--	--	--

*\* Some of our Design Technology curriculum is taught through our computing curriculum*