



# Design Technology Curriculum

DT	KS1 A	KS1 b	¼ A	¼ B	5/6 A	5/6 B
<b>Who Am I and Who Am I Becoming?</b>	Structure Picture Frames	Structure Picture Frames	Structure Picture Frames	Structure Picture Frames	Structure Picture Frames	Structure Picture Frames
<b>Celebrating difference</b>	Cooking (Brazilian)	Cooking (Indian)	Cooking (Romanian)	Cooking (Greek)	Cooking (Tibet)	Cooking (African)
<b>Wonders of Christmas</b>	Axles, Pulleys and Gears and Electrical and Mechanical Components – Santa Sleigh	Axles, Pulleys and Gears and Electrical and Mechanical Components – Santa Sleigh	Axles, Pulleys and Gears and Electrical and Mechanical Components – Santa Sleigh	Axles, Pulleys and Gears and Electrical and Mechanical Components – Santa Sleigh	Axles, Pulleys and Gears and Electrical and Mechanical Components – Santa Sleigh	Axles, Pulleys and Gears and Electrical and Mechanical Components – Santa Sleigh
<b>Heritage and Culture</b>	Structures EG: Railway Bridges	Structures EG link with USA	Structures EG: Stone age huts	Structures EG Roman Colosseum	Structures EG: Viking Boat	Structures EG: Anderson shelter
<b>Dreams and Goals - Building a Sustainable and Inclusive World</b>	Cooking Japanese	Cooking American	Cooking Israeli	Cooking Italian	Cooking Norwegian	Cooking South American
<b>The Easter Story</b>	Mechanisms EG: Easter card	Mechanisms EG: Easter card				
<b>Citizenship and the World</b>			Mechanisms EG: Pneumatics – moving monster	Mechanisms	Mechanisms	Mechanisms
<b>Lights Camera Action Art and DT</b>	Textiles Dip Dying Fabrics Recycled t-shirt designs	Textiles Plaiting, weaving Dream Catchers	Textiles 3D projects, cross stitch and applique	Textiles Ed Johnetta Miller artist study Quilting	Textiles Paste resist- pillow making	Textiles Indonesian Batisk

## Primary Design Technology Progression Map

	Year R	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p><b>National Curriculum and EYFS Framework</b></p> <p><i>Pupils should be taught to:</i></p>	<p><b>ELG Expressive arts and design:</b> <b>Creating with materials</b> ‘...safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.’</p> <p>‘Share their creations, explaining the process they have used.’</p> <p>‘Make use of props and materials when role playing characters in narratives and stories.’</p>	<p><b>DT1/1.1 Design</b> DT1/1.1a design purposeful, functional, appealing products for themselves and other users based on design criteria DT1/1.1b generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</p> <p><b>DT1/1.2 Make</b> DT1/1.2a select from and use a range of tools and equipment to perform practical tasks DT1/1.2b select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</p> <p><b>DT1/1.3 Evaluate</b> DT1/1.3a explore and evaluate a range of existing products DT1/1.3b evaluate their ideas and products against design criteria</p> <p><b>DT1/1.4 Technical Knowledge</b> DT1/1.4a build structures, exploring how they can be made stronger, stiffer and more stable DT1/1.4b explore and use mechanisms, in their products.</p> <p><b>DT1/2.1 Cooking &amp; Nutrition</b> DT1/2.1a use the basic principles of a healthy and varied diet to prepare dishes DT1/2.1b understand where food comes from.</p>	<p><b>DT2/1.1 Design</b> DT2/1.1a use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups DT2/1.1b generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p><b>DT2/1.2 Make</b> DT2/1.2a select from and use a wider range of tools and equipment to perform practical tasks accurately DT2/1.2b select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</p> <p><b>DT2/1.3 Evaluate</b> DT2/1.3a investigate and analyse a range of existing products DT2/1.3b evaluate their ideas and products against their own design criteria and consider the views of others to improve their work DT2/1.3c understand how key events and individuals in design and technology have helped shape the world</p> <p><b>DT2/1.4 Technological Knowledge</b> DT2/1.4a apply their understanding of how to strengthen, stiffen and reinforce more complex structures DT2/1.4b understand and use mechanical systems in their products DT2/1.4c understand and use electrical systems in their products DT2/1.4d apply their understanding of computing to programme, monitor and control their products.</p> <p><b>DT2/2.1 Cooking &amp; Nutrition</b> DT2/2.1a understand and apply the principles of a healthy and varied diet DT2/2.1b cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet DT2/2.1c become competent in a range of cooking techniques [for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways; using awareness of taste, texture and smell to decide how to season dishes and combine ingredients; adapting and using their own recipes] DT2/2.1c understand the source, seasonality and characteristics of a broad range of ingredients</p>				

## Primary Design Technology Progression Map

		Procedural Knowledge: Designing. <i>Pupils should...</i>		
	Year R	Key Stage 1	Lower Key Stage 2	Upper Key Stage 2
<b>Understanding contexts, users and purposes</b>	<p>Work within a small range of familiar contexts, such as imaginary, story-based, home, school, gardens, playgrounds and the local community.</p> <p>Begin to state what products they are designing and making, who they are for, how they work, and how they will make them suitable.</p>	<p>Work within a small range of familiar contexts, such as imaginary, story-based, home, school, gardens, playgrounds and the local community.</p> <p>State what products they are designing and making, who they are for, how they work, and how they will make them suitable.</p>	<p>Work within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment.</p> <p>Begin to describe the purpose of their products and their design features, explaining how particular parts of their products work.</p> <p>Begin to gather information about the needs and wants of particular individuals and groups, and develop their own design criteria.</p>	<p>Work confidently and independently within a broad range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment.</p> <p>Describe the purpose of their products and their design features, explaining in detail how particular parts of their products work.</p> <p>Gather information about the needs and wants of particular individuals and groups, develop their own design criteria and use these to inform their ideas.</p>
<b>Generating, developing, modelling and communicating ideas</b>	<p>Explore simple ideas.</p> <p>Develop and communicate ideas by talking and drawing.</p> <p>Begin to model ideas by exploring materials.</p>	<p>Generate ideas by drawing on their own experiences and knowledge of existing products.</p> <p>Develop and communicate ideas by talking and drawing, including labelling parts.</p> <p>Model ideas by exploring materials, components &amp; construction kits.</p> <p>With support, use information and communication technology, where appropriate, to develop and communicate their ideas.</p>	<p>Generate realistic ideas, focusing on the needs of the user.</p> <p>Begin to share and clarify ideas through discussion, and use annotated sketches and labelled drawings from different viewpoints to develop and communicate their ideas.</p> <p>Begin to model their ideas using prototypes.</p> <p>Use information and communication technology, where appropriate, to develop and communicate their ideas.</p>	<p>Generate realistic ideas, focusing on the needs of the user and drawing on research.</p> <p>Share and clarify ideas through discussion, and use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas.</p> <p>Model their ideas using prototypes.</p> <p>Use computer-aided design to develop and communicate their ideas where appropriate.</p>

## Primary Design Technology Progression Map

Procedural Knowledge: Making <i>Pupils should...</i>				
	Year R	Key Stage 1	Lower Key Stage 2	Upper Key Stage 2
<b>Planning</b>	Select from a range of tools, equipment and materials.	Select from a range of tools and equipment.  Select from a range of materials and components according to their characteristics.	Select tools and equipment suitable for the task.  Select materials and components suitable for the task.  Plan and order the stages of making.	Select tools and equipment suitable for the task, explaining their choice in relation to the skills/techniques used .  Select materials and components suitable for the task, explaining their choice according to functional properties and aesthetic qualities.  Produce appropriate lists of tools, equipment and materials that they need and formulate step-by-step plans.
<b>Practical skills and techniques</b>	<p>Begin to follow procedures for safety and hygiene.</p> <p>Use a small range of materials such as textiles and food ingredients.</p> <p>Cut and shape materials.</p> <p>With support, assemble, join and combine materials using a range of methods – e.g. masking tape, glue, staples</p> <p>With support, decorate fabrics with attached items - e.g. buttons, beads, sequins, braids, ribbons.</p> <p>Explore how to make structures stronger</p>	<p>Follow procedures for safety and hygiene.</p> <p>Use a small range of materials and components, such as construction kits, textiles, food ingredients and mechanical components.</p> <p>Measure, mark out, cut and shape materials/components, including cutting fabric from a template.</p> <p>Assemble, join and combine materials and component using a range of methods – e.g. masking tape, glue, staples</p> <p>With support, decorate fabrics with attached items - e.g. buttons, beads, sequins, braids, ribbons.</p> <p>Explore how to make structures stronger and more stable.</p>	<p>Follow procedures for safety and hygiene.</p> <p>Begin to use a wider range of materials and components than KS1, such as construction materials and kits, textiles, wood, food ingredients, mechanical and electric components.</p> <p>Measure, mark out, cut, shape and score materials/components with some accuracy.</p> <p>Assemble, join and combine materials and components with some accuracy, using a range of methods - e.g. masking tape, glue, staples, running stitch, over-sewing and blanket stitch.</p> <p>Sew on buttons and make loops.</p> <p>Begin to strengthen frames with diagonal struts, make structures more stable by giving them a wide base and measure and cut dowel accurately to 1cm.</p>	<p>Follow procedures for safety and hygiene.</p> <p>Use a wide range of materials and components, such as construction materials and kits, textiles, wood, food ingredients, mechanical and electric components.</p> <p>Measure, mark out, cut, shape and score materials and components to the nearest 1mm.</p> <p>Accurately assemble, join and combine materials and components, using a range of methods - e.g. masking tape, glue, staples, running stitch, over-sewing, blanket stitch, glue gun and modelling wire</p> <p>Decorate textiles appropriately (often before joining components).</p> <p>Build frameworks to stiffen and reinforce complex structures; use a bradawl to mark hole positions, use a hand drill to cut holes, and cut strip wood, dowel, and square sections of wood accurately to 1mm.</p>

## Primary Design Technology Progression Map

Procedural Knowledge: Evaluating <i>Pupils should...</i>				
	Year R	Key Stage 1	Lower Key Stage 2	Upper Key Stage 2
<b>Own ideas and products</b>	Talk about what they are making.	<p>Talk about their design ideas and what they are making.</p> <p>Make simple judgements about their products and ideas against design criteria.</p>	<p>Discuss the strengths and areas for development in their ideas and products.</p> <p>Refer to their own design criteria as they evaluate their completed products.</p> <p>Suggest how their products could be improved and begin to consider the views of others, including intended users, to improve their work.</p>	<p>Confidently discuss the strengths and areas for development in their ideas and products, using diagrams and presentations.</p> <p>Evaluate their ideas and products against their original design specification.</p> <p>Consider the views of others, including intended users, to improve their work.</p>
<b>Existing products</b>	<p>Explore:</p> <ul style="list-style-type: none"> <li>what products are</li> <li>who products are for</li> <li>what products are for</li> <li>how products work</li> <li>where products are used</li> <li>what materials products are made from</li> <li>what they like and dislike about products</li> </ul>	<p>Explore:</p> <ul style="list-style-type: none"> <li>what products are</li> <li>who products are for</li> <li>what products are for</li> <li>how products work</li> <li>where products are used</li> <li>what materials products are made from</li> <li>what they like and dislike about products</li> </ul>	<p>Begin to investigate and analyse:</p> <ul style="list-style-type: none"> <li>how well products have been designed and made</li> <li>why materials have been chosen</li> <li>how well products work and achieve their purposes</li> <li>how well products meet user needs and wants</li> <li>who designed and made the products</li> <li>whether products can be recycled or reused</li> <li>inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products</li> </ul>	<p>Investigate and analyse:</p> <ul style="list-style-type: none"> <li>how well products have been designed and made</li> <li>why materials have been chosen</li> <li>how well products work and achieve their purposes</li> <li>how well products meet user needs and wants</li> <li>who designed and made the products</li> <li>how much products cost to make</li> <li>how innovative products are</li> <li>how sustainable the materials in products are</li> <li>what impact products have beyond their intended purpose</li> <li>inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products</li> </ul>
Technological Knowledge. <i>Pupils should...</i>				
	Year R	Key Stage 1	Lower Key Stage 2	Upper Key Stage 2
<b>Making products work</b>	<p>Know about the simple working characteristics of materials.</p> <p>Know about the movement of some simple mechanical systems such as wheels and axles.</p>	<p>Know about the simple working characteristics of materials and components.</p> <p>Know about the movement of some simple mechanical systems such as levers, sliders, wheels and axles.</p>	<p>Begin to use science and maths to help design and make products.</p> <p>Know how a range of mechanical systems such as levers, sliders, wheels and axles, linkages and pneumatic systems create movement.</p> <p>Know how simple electrical circuits and components can be used to create functional products.</p>	<p>Use science and maths to help design and make products, and evidence this in the planning process.</p> <p>Know how a wider range of mechanical systems such as cams, pulleys, gears, levers and pneumatic systems create movement.</p> <p>Know how more complex electrical circuits and components can be used to create functional products, including parallel circuits and the use of multiple components.</p>

## Primary Design Technology Progression Map

	Year R	Key Stage 1	Lower Key Stage 2	Upper Key Stage 2
<b>Cooking and Nutrition</b> <i>Pupils should...</i>				
<b>Where food comes from</b>	Know that all food comes from plants or animals	Know that all food comes from plants or animals, and that food has to be farmed, grown elsewhere (e.g. home) or caught.	Know 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 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 seasons may affect the food available and know how food is processed into ingredients that can be eaten or used in cooking.
<b>Food preparation, cooking and nutrition</b>	<p>Know the names of key, basic foodstuffs; know that some foods are healthy and some are unhealthy.</p> <p>Know that everyone should eat at least five portions of fruit and vegetables every day.</p> <p>With support, begin to understand how to prepare simple dishes, without using a heat source.</p> <p>With support, begin to use techniques such as cutting, peeling and grating.</p> <p>Begin to develop food vocabulary using taste, smell, texture and feel.</p> <p>Measure and weigh food items, using non-statutory measures e.g. spoons, cups, in accordance with SSM requirements for EYFS.</p>	<p>Know how to name and sort foods into the five groups in The Eatwell Plate.</p> <p>Know that everyone should eat at least five portions of fruit and vegetables every day.</p> <p>With support, know how to prepare simple dishes safely and hygienically, without using a heat source.</p> <p>With support, use techniques such as cutting, peeling and grating.</p> <p>Develop food vocabulary using taste, smell, texture and feel.</p> <p>Measure and weigh food items, using non-statutory measures e.g. spoons, cups, in accordance with the KS1 NC for Maths.</p>	<p>Know that a healthy diet is made up from a variety and balance of different food and drink, as depicted in The Eatwell Plate.</p> <p>Know that to be active and healthy, food and drink are needed to provide energy for the body.</p> <p>Begin to know how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.</p> <p>Begin to use a wider range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p> <p>Develop sensory vocabulary/knowledge using, smell, taste, texture and feel.</p> <p>Weigh and measure using scales and standard measures, in accordance with the Year 3/4 NC for Maths.</p>	<p>Know that different food and drink contain different substances – nutrients, water and fibre – that are needed for health, and make comparisons between different foodstuffs.</p> <p>Understand nutritional labelling on food packets and make comparisons.</p> <p>Know how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.</p> <p>Use a wide range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p> <p>Develop sensory vocabulary/knowledge using, smell, taste, texture and feel.</p> <p>Weigh and measure using scales with increasing accuracy, in accordance with the Year 5/6 NC for Maths.</p> <p>Know that recipes can be adapted to change the appearance, taste, texture and aroma</p>