



D&T Overview with links to the National Curriculum

KS1 - Year One

Topic title/when taught:	Aims and objectives:	National Curriculum links:
Autumn Cooking and nutrition Smoothies	<ul style="list-style-type: none">• To identify fruits.• To describe where fruits and vegetables grow.• To practise food preparation skills.• To select ingredients for a recipe.• To apply food preparation skills to a recipe.• To evaluate against the design brief.	Use the basic principles of a healthy and varied diet to prepare dishes. Understand where food comes from.
Spring Mechanisms Wheels and axels	<ul style="list-style-type: none">• To understand how wheels move.• To identify what stops wheels from turning.• To design a moving vehicle.• To build a moving vehicle.	Design purposeful, functional, appealing products for themselves and other users based on design criteria. Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].

		<p>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p> <p>Explore and evaluate a range of existing products.</p> <p>Evaluate their ideas and products against design criteria.</p> <p>Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p>
<p>Summer Textiles Puppets</p>	<ul style="list-style-type: none"> • To join fabrics together using different methods. • To use a template to create my design. • To join two fabrics together accurately. • To embellish my design using joining methods. 	<p>Design purposeful, functional, appealing products for themselves and other users based on design criteria</p> <p>Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</p> <p>Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].</p> <p>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p> <p>Explore and evaluate a range of existing products evaluate their ideas and products against design criteria.</p>

Year 2

Topic title/when taught:	Aims and objectives:	National Curriculum links:
Autumn Cooking and nutrition Balanced diet	<ul style="list-style-type: none"> • To recognise foods and their food groups. • To identify the balance of food groups in a meal. • To identify an appropriate piece of equipment to prepare a given food. • To select balanced combinations of ingredients. • To design based on criteria. • To evaluate a dish based on design criteria. 	Use the basic principles of a healthy and varied diet to prepare dishes. Understand where food comes from.
Spring Structures Baby bear's chair	<ul style="list-style-type: none"> • To explore the concept and features of structures and the stability of different shapes. • To understand that the shape of the structure affects its strength. • To make a structure according to design criteria. • To produce a finished structure and evaluate its strength, stiffness and stability. 	Design purposeful, functional, appealing products for themselves and other users based on design criteria. Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology. Select from and use a range of tools and equipment to perform practical tasks [for example, cutting,

		<p>shaping, joining and finishing].</p> <p>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p> <p>Explore and evaluate a range of existing products.</p> <p>Evaluate their ideas and products against design criteria.</p> <p>Build structures, exploring how they can be made stronger, stiffer and more stable.</p>
<p>Summer</p> <p>Textiles</p> <p>Electric poster</p>	<ul style="list-style-type: none"> • To sew a running stitch. • To join fabrics using a running stitch. • To decorate a pouch using fabric glue or stitching. 	<p>Design purposeful, functional, appealing products for themselves and other users based on design criteria.</p> <p>Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate,</p>

		<p>information and communication technology.</p> <p>Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].</p> <p>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p> <p>Explore and evaluate a range of existing products.</p> <p>Evaluate their ideas and products against design criteria.</p>
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LKS2 - Year Three

Topic title/when taught:	Aims and objectives:	National Curriculum links:
Autumn Mechanisms Pneumatic toys	<ul style="list-style-type: none">• To understand how pneumatic systems work.• To design a toy that uses a pneumatic system.• To create a pneumatic system.• To test and finalise ideas against design criteria.	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. Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. Select from and use a wider range of materials and components,

		<p>including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.</p> <p>Investigate and analyse a range of existing products.</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p>Understand how key events and individuals in design and technology have helped shape the world.</p> <p>Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].</p>
Spring Structures Castles	<ul style="list-style-type: none"> • To recognise how multiple shapes (2D and 3D) are combined to form a strong and stable structure. • To design a castle. • To construct 3D nets 	<p>Use research and develop design criteria to inform the design of innovative, functional,</p>

	<ul style="list-style-type: none">• To construct and evaluate my final product.	<p>appealing products that are fit for purpose, aimed at particular individuals or groups.</p> <p>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>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</p> <p>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>
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		<p>Investigate and analyse a range of existing products.</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p>Understand how key events and individuals in design and technology have helped shape the world.</p> <p>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</p>
<p>Summer Electrical systems Electrical poster</p>	<ul style="list-style-type: none"> • To understand the purpose of information design. • To research a set topic to develop a range of initial ideas. • To develop an initial idea into a final design. • To assemble my final product and incorporate a simple circuit. 	<p>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.</p> <p>Generate, develop, model and communicate their ideas through</p>

		<p>discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</p> <p>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>Investigate and analyse a range of existing products.</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of</p>
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		<p>others to improve their work.</p> <p>Understand how key events and individuals in design and technology have helped shape the world.</p> <p>Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].</p>
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LKS2 - Year Four

Topic title/when taught:	Aims and objectives:	National Curriculum links:
<p>Autumn</p> <p>Cooking and nutrition</p> <p>Adapting a recipe</p>	<ul style="list-style-type: none"> • To evaluate existing biscuit products. • To prepare and cook a dish. • To select ingredients and follow a budget. • To take inspiration from existing products. • To make and test a prototype biscuit. • To evaluate a final product. 	<p>Understand and apply the principles of a healthy and varied diet</p> <p>prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</p> <p>Understand seasonality and know where and how a variety of ingredients are grown,</p>

		reared, caught and processed.
Spring Textiles Fastening	<ul style="list-style-type: none"> • To explain the advantages and disadvantages of different types of fastening type. • To design a product to meet design criteria. • To make and test a paper template. • To assemble a book jacket. 	<p>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.</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. Select from and use a wider range of materials and components, including construction</p>

		<p>materials, textiles and ingredients, according to their functional properties and aesthetic qualities.</p> <p>Investigate and analyse a range of existing products.</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p>Understand how key events and individuals in design and technology have helped shape the world.</p>
<p>Summer</p> <p>Digital world</p> <p>Mindful moments</p> <p>timer</p>	<ul style="list-style-type: none"> • To evaluate existing products. • To develop design criteria. • To program and control a product. • To develop and communicate ideas. • To develop ideas through computer-aided design. • To consider feedback and evaluate. 	<p>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.</p> <p>Generate, develop, model and communicate their ideas through</p>

		<p>discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design. Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. 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. Investigate and analyse a range of existing products. Evaluate their ideas and products against their own design criteria and consider the views of</p>
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		<p>others to improve their work.</p> <p>Understand how key events and individuals in design and technology have helped shape the world.</p> <p>Apply their understanding of computing to program, monitor and control their products.</p>
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UKS2 - Year Five

Topic title/when taught:	Aims and objectives:	National Curriculum links:
<p>Autumn</p> <p>Mechanisms</p> <p>Pop-up books</p>	<ul style="list-style-type: none"> • To design a pop-up book. • To follow my design brief to make my pop-up book. • To use layers and spacers to cover the working of mechanisms. • To create a high-quality product suitable for a target user. 	<p>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.</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded</p>

		<p>diagrams, prototypes, pattern pieces and computer-aided design. Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. 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>Investigate and analyse a range of existing products.</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p>Understand how key events and individuals in</p>
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		<p>design and technology have helped shape the world.</p> <p>Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].</p>
Spring Structures Bridges	<ul style="list-style-type: none"> • To explore how to reinforce a beam (structure) to improve its strength. • To build a spaghetti truss bridge. To build a wooden truss bridge. • To complete, reinforce and evaluate my truss bridge. 	<p>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.</p> <p>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>Select from and use a wider range of tools and equipment to perform practical tasks [for</p>

		<p>example, cutting, shaping, joining and finishing], accurately. 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>Investigate and analyse a range of existing products.</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p>Understand how key events and individuals in design and technology have helped shape the world.</p> <p>Apply their understanding of how to strengthen, stiffen and</p>
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		reinforce more complex structures.
Summer Electrical systems Doodles	<ul style="list-style-type: none"> • To understand how motors are used in electrical products. • To investigate an existing product to determine the factors that affect the product's form and function. • To apply the findings from research to develop a unique product. • To develop a DIY kit for another individual to assemble their product. 	<p>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.</p> <p>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>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</p> <p>Select from and use a wider range of materials and components, including construction</p>

		<p>materials, textiles and ingredients, according to their functional properties and aesthetic qualities.</p> <p>Investigate and analyse a range of existing products.</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p>Understand how key events and individuals in design and technology have helped shape the world.</p> <p>Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].</p>
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UKS2 - Year Six

Topic title/when taught:	Aims and objectives:	National Curriculum links:
<p>Autumn Cooking and nutrition Come dine with me</p>	<ul style="list-style-type: none"> • To explain the use of complementary flavours. • To research and design a three-course meal. • To explain recipe choices. • To apply culinary skills and knowledge. • To apply culinary skills and knowledge. • To apply culinary skills and knowledge. 	<p>Understand and apply the principles of a healthy and varied diet.</p> <p>Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p>
<p>Spring Textiles Waistcoats</p>	<ul style="list-style-type: none"> • To design a waistcoat. • To mark and cut fabric according to a design. • To assemble a waistcoat. • To decorate your waistcoat. 	<p>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.</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design select from and use a</p>

		<p>wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</p> <p>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>Investigate and analyse a range of existing products.</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p>Understand how key events and individuals in design and technology have helped shape the world</p>
<p>Summer</p> <p>Digital world</p> <p>Navigating the world</p>	<ul style="list-style-type: none"> • To write a design brief and criteria based on a client request. • To write a program to include multiple functions as part of a navigation device. • To develop a sustainable product concept. 	<p>Use research and develop design criteria to inform the design of innovative, functional, appealing</p>

	<ul style="list-style-type: none"> • To develop 3D CAD skills to produce a virtual model. • To present a pitch to 'sell' the product to a specified client. 	<p>products that are fit for purpose, aimed at particular individuals or groups. Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. 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. Investigate and analyse a range of existing products. Evaluate their ideas and products against their own design criteria and consider</p>
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		<p>the views of others to improve their work.</p> <p>Understand how key events and individuals in design and technology have helped shape the world.</p> <p>Apply their understanding of computing to program, monitor and control their products.</p>
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