

# Design Technology overview – key National Curriculum links

	Autumn	Spring	Summer
Year 1	<p><b>Finger Puppets</b></p> <p><b>Design</b> Design functional, appealing products.</p> <p><b>Make</b> Select from and use a range of tools and equipment to perform practical tasks. Select from and use a wide range of materials and components, including construction materials and textiles according to their characteristics</p> <p><b>Evaluate</b> Explore and evaluate a range of existing products.</p> <p><b>Technical Knowledge</b> Build structures, exploring how they can be made stronger, stiffer and more stable</p>	<p><b>Egg Carriers</b></p> <p><b>Design</b> Design functional, appealing products.</p> <p><b>Make</b> Select from and use a wide range of materials and components.</p> <p><b>Evaluate</b> Explore and evaluate a range of existing products Evaluate their ideas and products against design criteria.</p> <p><b>Technical Knowledge</b> Build structures, exploring how they can be made stiffer.</p>	<p><b>Dips and Dippers</b></p> <p><b>Design</b> design purposeful, appealing products for themselves and other users based on design criteria generate, develop, model and communicate their ideas through talking, drawing, and, where appropriate, information and communication technology</p> <p><b>Make</b> select from and use a wide range of materials and components, including ingredients, according to their characteristics</p> <p><b>Evaluate</b> explore and evaluate a range of existing products evaluate their ideas and products against design criteria</p> <p><b>Cooking and nutrition</b> use the basic principles of a healthy and varied diet to prepare dishes understand where food comes from</p>
Year 2	<p><b>Winter Cards with a Surprise</b></p> <p><b>Design</b> Design purposeful, functional, appealing products for themselves and other users Generate, develop, model and communicate ideas.</p> <p><b>Make</b> Select from and use a range of tools and equipment to perform practical tasks. Select from and use a wide range of materials and components, including construction materials, textiles according to their characteristics.</p> <p><b>Evaluate</b> Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria</p>	<p><b>Great Fire of London Fire Engines</b></p> <p><b>Design</b> Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</p> <p><b>Make</b> Select from and use a range of tools and equipment to perform practical tasks. Select from and use a wide range of materials and components, including construction materials, according to their characteristics</p> <p><b>Evaluate</b> Evaluate their ideas and products against design criteria</p> <p><b>Technical Knowledge</b> Build structures, exploring how they can be made stronger, stiffer and more stable</p>	<p><b>Sensational Salads</b></p> <p><b>Design</b> design purposeful, functional, appealing products for themselves and other users based on design criteria generate, develop, model and communicate their ideas through talking, drawing, and, where appropriate, information and communication technology</p> <p><b>Make</b> select from and use a range of tools and equipment to perform practical tasks select from and use a wide range of materials and components, including ingredients, according to their characteristics</p> <p><b>Evaluate</b> evaluate their ideas and products against design criteria</p> <p><b>Cooking and nutrition</b></p>

	<p>Technical Knowledge Explore and use mechanisms (levers, sliders, wheels, and axles)</p>		<p>use the basic principles of a healthy and varied diet to prepare dishes understand where food comes from</p>
<p><b>KS1 End Points</b></p>	<p><b>By the end of KS1, pupils will:</b></p> <ul style="list-style-type: none"> <li>✓ Be able to design functional appealing products, based on experiences</li> <li>✓ Develop and communicate their ideas in a range of ways</li> <li>✓ Select from a range of tools and materials to make products</li> <li>✓ Assemble, join and combine materials in different ways</li> <li>✓ Evaluate a product, discussing likes and dislikes and using a design brief</li> <li>✓ Build structures, considering ways to strengthen</li> <li>✓ Begin to explore uses of mechanisms and levers in products</li> <li>✓ Understand where food comes from</li> <li>✓ Use basic principles of healthy diet and food hygiene to prepare and make food</li> </ul>		
<p><b>Year 3</b></p>	<p style="text-align: center;"><b>Stone Age Puppets</b></p> <p><b>Design</b> Use research and develop design criteria to inform the design of products that are fit for purpose, aimed at particular individuals or groups. Generate, develop, model and communicate ideas through discussion and annotated sketches</p> <p><b>Make</b> Select from and use a wider range of tools and equipment to perform practical tasks accurately Select from and use a wider range of materials and components</p> <p><b>Evaluate</b> Investigate and analyse a range of existing products. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p><b>Technical Knowledge</b> Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Understand and use mechanical systems in their products (gears, pulleys, cams, levers and linkages)</p>	<p style="text-align: center;"><b>Pizzas</b></p> <p><b>Design</b> Use research and develop design criteria to inform the design of products that are fit for purpose, aimed at particular individuals or groups.</p> <p><b>Make</b> select from and use a wider range of materials and components, including ingredients, according to their functional properties and aesthetic qualities</p> <p><b>Evaluate</b> Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. Investigate and analyse a range of existing products</p> <p><b>Cooking and Nutrition</b> Understand the principles of a healthy and varied diet. 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 style="text-align: center;"><b>Project Scarecrow</b></p> <p><b>Design</b> use research and develop design criteria to inform the design of appealing products that are fit for purpose, aimed at particular individuals or groups generate, develop, model and communicate their ideas through discussion, annotated sketches</p> <p><b>Make</b> select from and use a wider range of tools and equipment to perform practical tasks accurately select from and use a wider range of materials and components, including construction materials, according to their functional properties and aesthetic qualities</p> <p><b>Evaluate</b> investigate and analyse a range of existing products</p> <p><b>Technical knowledge</b> apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p>

## Year 4

### Christmas Decorations

#### Design

use research and develop design criteria to inform the design of appealing products that are fit for purpose, aimed at particular individuals or groups  
Generate, develop, model and communicate ideas through discussion, annotated sketches and pattern pieces

#### Make

select from and use a wider range of materials and components, including textiles according to their functional properties and aesthetic qualities

#### Evaluate

Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.  
investigate and analyse a range of existing products

#### Technical Knowledge

apply their understanding of how to strengthen, stiffen and reinforce more complex structures

### Let's Go Fly a Kite

#### Design

Use research and develop design criteria to inform design of products that are functional, appealing and fit for purpose, aimed at particular individuals or groups  
Generate, develop, model and communicate ideas through discussion, annotated sketches, cross-sectional and exploded diagrams

#### Make

Select from and use a wider range of tools and equipment to perform practical tasks

#### Evaluate

Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work  
Understand how key events and individuals in design and technology have helped shape the world

#### Technical Knowledge

Apply their understanding of how to strengthen, stiffen and reinforce more complex structures

### Bake Off!

#### Design

use research and develop design criteria to inform the design of innovative, appealing products that are fit for purpose, aimed at particular individuals or groups

#### Make

select from and use a wider range of materials and components, including ingredients, according to their functional properties and aesthetic qualities

#### Evaluate

investigate and analyse a range of existing products  
evaluate their ideas and products against their own design criteria and consider the views of others to improve their work

#### Cooking and Nutrition

understand and apply the principles of a healthy and varied diet  
prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques

## LKS2 end points

### By the end of LKS2, pupils will:

- ✓ Begin to use research to design functional, appealing products
- ✓ Begin to create detailed, annotated designs to communicate their ideas
- ✓ Select tools and materials to make products, appropriate to the task
- ✓ Use a range of techniques to assemble, combine and join materials, measuring with increasing accuracy
- ✓ Evaluate a product against a design criteria.
- ✓ Strengthen more complex structures, considering materials and ways to join
- ✓ Use simple linkages and joints to create movement in products
- ✓ Prepare and cook dishes for a healthy and varied diet, considering how to be safe and hygienic

<b>Year 5</b>	<b>Christmas Sewn Up</b>	<b>Pastry Products</b>	<b>Heath Robinson Machines</b>
	<p><b>Design</b> Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces</p> <p><b>Make</b> Select from and use a wider range of materials and components, including textiles according to their functional properties and aesthetic qualities.</p> <p><b>Evaluate</b> Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p><b>Technical Knowledge</b> Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</p>	<p><b>Design</b> 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><b>Make</b> select from and use a wider range of materials and components, including ingredients, according to their functional properties and aesthetic qualities</p> <p><b>Evaluate</b> investigate and analyse a range of existing products evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> <p><b>Cooking and Nutrition</b> understand and apply the principles of a healthy and varied diet 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><b>Design</b> Use research and develop design criteria to inform design of innovative products that are fit for purpose, aimed at particular individuals or groups Generate, develop, model and communicate ideas through discussion, annotated sketches, cross-sectional and exploded diagrams</p> <p><b>Make</b> Select from and use a wider range of tools and equipment to perform practical tasks Select from and use a wider range of materials and components, including construction materials according to their functional properties</p> <p><b>Evaluate</b> Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work Understand how key events and individuals in design and technology have helped shape the world</p> <p><b>Technical knowledge</b> Understand and use mechanical systems in their products</p>
<b>Year 6</b>	<b>Christmas Cakes</b>	<b>Steady Hand Games</b>	<b>We Are Y6!</b>
	<p><b>Design</b> Use research and develop design criteria to inform design of products that are fit for purpose. 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>Make</b> Select from and use a wider range of materials and components, including ingredients, according to their functional properties and aesthetic qualities.</p> <p><b>Evaluate</b> Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p> <p><b>Cooking and Nutrition</b></p>	<p><b>Design</b> Use research and develop design criteria to inform design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups Generate, develop, model and communicate ideas through discussion, annotated sketches, cross-sectional exploded diagrams, prototypes and computer aided design</p> <p><b>Make</b> Select from and use a wider range of tools and equipment to perform practical tasks Select from and use a wider range of materials and components, including construction materials according to their functional properties</p> <p><b>Evaluate</b> Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> <p><b>Technical knowledge</b> Understand and use electrical systems in their products</p>	<p><b>Design</b> 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>Make</b> select from and use a wider range of tools and equipment to perform practical tasks accurately select from and use a wider range of materials and components, including textiles, according to their functional properties and aesthetic qualities</p> <p><b>Evaluate</b> evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> <p><b>Technical knowledge</b> apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p>

Understand seasonality, and know where and how a variety of ingredients are grown, reared and processed.

## UKS2 end points

### By the end of UKS2, pupils will:

- ✓ Use research to design functional, appealing products, considering the audience
- ✓ Create detailed, annotated designs to communicate ideas
- ✓ Select from a wider range of materials, tools and components according to their functional and aesthetic qualities
- ✓ Test and evaluate their own products and those of others, identifying strengths and areas for development
- ✓ Reinforce and strengthen complex structures, refining a product after testing
- ✓ Understand and use electrical systems in their products
- ✓ understand and apply the principles of a healthy and varied diet
- ✓ 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.

## STEM Project

Each year group will have the opportunity to build on and apply their DT substantive and disciplinary knowledge through taking part in a STEM project. This will cover the following National Curriculum objectives from the DT curriculum:

### KS1

#### Design

generate, develop, model and communicate their ideas through talking, drawing, and, where appropriate, information and communication technology

#### Make

Select from and use a wide range of materials and components, including construction materials, according to their characteristics

#### Evaluate

evaluate their ideas and products against design criteria

#### Technical Knowledge

Build structures, exploring how they can be made stronger, stiffer and more stable

### KS2

#### Design

Generate, develop, model and communicate ideas through discussion and annotated sketches, cross-sectional and exploded diagrams and computer aided design

#### Make

select from and use a wider range of materials and components, according to their functional properties and aesthetic qualities

#### Evaluate

Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.

Understand how key events and individuals in design and technology have helped shape the world

#### Technical Knowledge

Apply their understanding of how to strengthen, stiffen and reinforce more complex structures

Apply their understanding of computing to program, monitor and control their products