



# Curriculum Coverage for D&T

## Sunnyhill Primary School



This is the D&T knowledge that the children should cover over their time with us, building on their skills each year. It has been split into five strands:

### **Textiles**

### **Cooking and Nutrition**

### **Mechanisms**

### **Structures**

### **Electrical and mechanical components**

### **EYFS Development Matters-**

There are no set topics for D&T in EYFS. Science is incorporated into the "Understanding The World " strand of Development Matters. D&T provision may arise out of children's interest eg. space or finding mini-beasts in the Outside Classroom. Links may be made with the text, home learning, visits or experiences, 22-36 months

- Experiments with blocks, colours and marks.

30-50 months

- Uses various construction materials.
- Beginning to construct, stacking blocks vertically and horizontally, making enclosures and creating spaces.
- Joins construction pieces together to build and balance.
- Realises tools can be used for a purpose.

40-60 months

- Experiments to create different textures.
- Understands that different media can be combined to create new effects.
- Manipulates materials to achieve a planned effect.
- Constructs with a purpose in mind, using a variety of resources.
- Uses simple tools and techniques competently and appropriately.
- Selects appropriate resources and adapts work where necessary.
- Selects tools and techniques needed to shape, assemble and join materials they are using.

ELG:

- Children safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.

## **National Curriculum: Key Stage 1 -**

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts, such as the home and school, gardens and playgrounds, the local community, industry and the wider environment.

**By the end of Key Stage 1 pupils should be able to:**

### **DESIGNING AND MAKING**

#### **Design**

- 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

#### **Make**

- select from and used a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
- select from and used a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

#### **Evaluate**

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

#### **Technical knowledge**

- build structures, exploring how they can be made stronger, stiffer and more stable
- explore and used mechanisms [for example, levers, sliders, wheels and axles], in their products.

### **COOKING AND NUTRITION**

- Understand and apply the principles of a healthy and varied diet to prepare dishes
- Understand where food comes from

	<b>Textiles</b>	<b>Cooking and Nutrition</b>	<b>Mechanisms</b>	<b>Structures</b>	<b>Electrical and mechanical components</b>
<b>Year 1</b>	<p>To begin to measure in cm.</p> <p>To use scissors precisely to cut straight lines, corners and curves in felt, cotton etc.</p> <p>To join textiles using glue, staples, sticky tape, masking tape etc.</p> <p>To make a textile product that has a good finish and can do the job it was made for.</p>	<p>To prepare food safely and hygienically and describe what this means.</p> <p>To identify the cutting edge of a knife.</p> <p>To know different grips needed for stirring, cutting etc.</p> <p>To describe the properties of the food ingredients: taste, smell, texture, and consistency.</p>	<p>To begin to use scissors to cut paper and thin card.</p> <p>To use construction kits to try out ideas.</p> <p>To begin to shape, assemble, join and combine materials in a variety of ways.</p> <p>To use simple levers and sliding mechanisms to create movement.</p>	<p>To build structures, exploring how they can be made stronger, stiffer and more stable.</p>	<p>Not covered in Year 1</p>
<b>Year 2</b>	<p>To measure accurately in cm.</p> <p>To use scissors precisely to cut straight lines, corners and curves in felt, cotton etc.</p> <p>To join textiles using glue, staples, tying or a simple stitch.</p> <p>To use a template.</p> <p>To make a textile product that has a good finish and can do the job it was made for.</p>	<p>To prepare food safely and hygienically and describe what this means – washing hands, hair tied back, wearing an apron etc.</p> <p>To understand simple food processing skills eg. Washing, cutting, slicing, grating etc.</p> <p>To weigh or measure ingredients accurately</p> <p>To describe a food product using its properties.</p> <p>To recognise the necessity of following an order in a recipe.</p> <p>To learn about healthy diet and balance of foods.</p>	<p>To use scissors safely to cut paper and thin card.</p> <p>To use construction kits to try out ideas.</p> <p>To begin to understand how wheels and axles work.</p> <p>To begin to shape, assemble join and combine materials in a variety of different ways.</p> <p>To use simple levers and sliding mechanisms to create movement.</p>	<p>To build structures, exploring how they can be made stronger, stiffer and more stable.</p> <p>To describe materials used to make a structure.</p>	<p>Not covered in Year 2</p>

### **National Curriculum: Key Stage 2-**

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment.

**By the end of Key Stage 2 pupils should be able to:**

#### **DESIGNING AND MAKING**

##### **Design**

- 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

##### **Make**

- select from and used a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately
- select from and used a wider range of materials and components, including construction materials, textiles and 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
- demonstrate an understanding of 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
- understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
- understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
- apply their understanding of computing to program, monitor and control their products.

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

	<b>Textiles</b>	<b>Cooking and Nutrition</b>	<b>Mechanisms</b>	<b>Structures</b>	<b>Electrical and mechanical components</b>
<b>Year 3</b>	<p>To select the appropriate textile(s) for a product.</p> <p>To use sharp scissors accurately to cut textiles.</p> <p>To know that the texture and other properties of materials affect choice.</p> <p>To begin to use basic sewing techniques.</p> <p>To improve designs.</p>	<p>To prepare food safely and hygienically and describe what this means – washing hands, hair tied back, wearing an apron etc.</p> <p>To select ingredients for a food product.</p> <p>To work in a safe and hygienic way.</p> <p>To measure out ingredients by weight or quantity, using scales where appropriate.</p> <p>To know about healthy diet and balance in foods.</p> <p>To know correct knife grips for cutting and spreading.</p> <p>To begin to hold food steady with a fork whilst chopping, slicing.</p>	<p>To use pencils and rulers to mark for cutting.</p> <p>To use more advanced levers and sliding mechanisms to create movement.</p> <p>To understand wheels and axles.</p> <p>To begin to understand winding and turning mechanisms.</p>	<p>To build structures, exploring how they can be made stronger, stiffer and more stable.</p> <p>To describe materials used to make a structure.</p> <p>To begin to shape, assemble, join and combine materials in a variety of ways.</p> <p>To understand that 3D structures can be constructed from nets.</p>	Not covered in Year 3

<p><b>Year 4</b></p>	<p>To select the appropriate textile(s) for a product.</p> <p>To use sharp scissors accurately to cut textiles.</p> <p>To use basic sewing techniques.</p> <p>To know that the texture and other properties of materials affect choice.</p> <p>To improve designs.</p>	<p>To select ingredients for a food product.</p> <p>To work in a safe and hygienic way.</p> <p>To follow a simple recipe.</p> <p>To measure out ingredients by weight or quantity, using scales where appropriate.</p> <p>To present a food product to impress the intended user.</p> <p>To know what is meant by healthy eating.</p> <p>To know correct knife grips for cutting and spreading.</p> <p>To hold food steady with a fork whilst chopping, slicing.</p>	<p>To use levers and sliding mechanisms to create movement.</p> <p>To understand wheels and axles.</p> <p>To begin to understand winding and turning mechanisms.</p> <p>To use a pencil and a ruler to mark for cutting.</p>	<p>To measure and mark out materials needed for a structure.</p> <p>To build a structure.</p> <p>To describe materials used to make a structure.</p>	<p>To select the most appropriate techniques and tools to make a product.</p> <p>To come up with solutions to problems as they happen.</p> <p>To make a product that uses both electrical and mechanical components.</p> <p>To produce a good finish so that a user will find it both useful and attractive.</p> <p>To begin to use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</p>
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	<b>Textiles</b>	<b>Cooking and Nutrition</b>	<b>Mechanisms</b>	<b>Structures</b>	<b>Electrical and mechanical components</b>
<b>Year 5</b>	<p>To use art textiles skills such as stitching to help create a product that is sturdy and fit for purpose.</p> <p>To begin to use basic sewing and decorating techniques. To use pins to secure patterns.</p>	<p>To ensure a food product uses a selection of ingredients to meet an identified need. (e.g. lunchtime snack, healthy sandwich, low gluten).</p> <p>To work in a safe and hygienic way.</p> <p>To show increasing accuracy in measuring and weighing.</p> <p>To follow a recipe.</p> <p>To present packaged food using other DT skills.</p> <p>To persuade others to take an interest in a product by using persuasive writing skills that describe the qualities of a product.</p> <p>To understand seasonality and choose ingredients accordingly</p>	<p>To measure accurately using mm.</p> <p>To know about controlling movement with a cam mechanism.</p> <p>To describe the properties of the materials that have been used.</p> <p>To make a product that uses movement eg. Gears, pulleys, cams, levers and linkages</p>	<p>To measure and mark out materials needed for a structure.</p> <p>To build a structure</p> <p>To describe materials used to make a structure.</p> <p>To finish off work so it looks neat and tidy.</p> <p>To measure and mark out materials with care and use safe ways of cutting it, including using a junior hacksaw.</p> <p>To use a range of joins.</p>	<p>To choose components that can be controlled by switches or by ICT equipment.</p> <p>To improve a product after testing.</p> <p>To finish a product that would appeal to users.</p>

<p><b>Year 6</b></p>	<p>To know that textile work incorporates the views of intended users' and for the purpose.</p> <p>To use art textiles skills such as stitching to help create a product that is sturdy and fit for purpose.</p> <p>To include structural changes to textile products, such as plaiting or weaving to create new products such as rope, belts, bracelets etc.</p>	<p>To store and prepare food properly.</p> <p>To know that proportions of ingredients will affect the product.</p> <p>To ensure a food product uses a selection of ingredients to meet an identified need. (e.g. lunchtime snack, healthy sandwich, low gluten).</p> <p>To work in a safe and hygienic way.</p> <p>To show increasing accuracy in measuring and weighing.</p> <p>To present packaged food using other DT skills.</p> <p>To persuade others to take an interest in a product by using persuasive writing skills that describe the qualities of a product.</p> <p>To understand seasonality and choose ingredients accordingly</p>	<p>To identify the correct materials for the right job and understand how this helps a product to work well.</p> <p>To use a number of materials and join them so they are strong.</p> <p>To use art skills to add design or detail to a product.</p> <p>To make a product that uses movement eg. Gears, pulleys, cams, levers and linkages</p>	<p>To measure and mark out materials needed for a structure.</p> <p>To build a structure</p> <p>To describe materials used to make a structure.</p> <p>To finish off work so it looks neat and tidy.</p> <p>To measure and mark out materials with care and use safe ways of cutting it, including using a junior hacksaw.</p> <p>To use a range of joins.</p>	<p>To apply understanding of computing to program, monitor and control products.</p> <p>To use science skills (resistance, batteries in series or parallel, variable resistance to dim lights or control speed) to alter the way electrical products behave.</p> <p>To ensure products are well finished using a range of art and other finishing techniques.</p> <p>To use precise electrical connections.</p>
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