

## [Statement of Intent for Design and Technology at Raeburn Primary School](#)

Design and Technology is an inspiring, rigorous and practical subject. Design and Technology encourages children to learn and to think creatively to solve problems both as individuals and as members of a team.

At Raeburn, we encourage children to use their creativity and imagination, to design and make products that solve real and relevant problems within a variety of contexts. We aim to link work to other subjects through a thematic approach which helps to capture the children's interest and motivate and give a purpose to their learning.

Skills are taught progressively to ensure that all children are able to learn and practice in order to develop as they move through the school. The children are also given opportunities to reflect upon and evaluate their own designs so that they can adapt and improve their product and are encouraged to become innovators and risk-takers.

### [Aims](#)

The National Curriculum for Design and Technology aims to ensure that all pupils:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- build and apply a repertoire of knowledge, understanding and skills in order to design and make high quality prototypes and products for a wide range of users
- critique, evaluate and test their ideas and products and the work of others
- understand and apply the principles of nutrition and learn how to cook.
- enable children to understand how key events and individuals in design and technology have helped shape the world (KS2)

### [Skills](#)

The skills covered through blocks of work will include:

#### [Design](#)

- Design purposeful, functional, appealing products for themselves and other users based on design criteria.
- Generate, develop, model and communicate their ideas effectively.

#### [Make](#)

- 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 and ingredients, according to their characteristics

#### [Evaluate](#)

- Explore, evaluate and analyse a range of existing products
- Evaluate their ideas and products against design criteria
- Consider the views of others to improve their work (KS2)

### [Cooking and Nutrition](#)

At Raeburn we aim to cook every term, making links to other curriculum areas where possible. When carrying out cookery which involves using the oven, teachers are responsible for reading and adhering to the regulations of the associated risk assessment.

### [Raeburn's Mini Angels](#)

At Raeburn we ensure that we are encouraging our children to be good citizens and help our local community. Since March 2018, we have been cooking for Wirral's Homeless Angels. We aim to cook with each class once a year and the children prepare and make a savoury meal and a sweet dessert.

As of March 2020, we have cooked over 700 meals to ensure that the skills are progressing Miss Johnson and Mrs Ellis make sandwiches with F2 - Year 1, cook and prepare one savoury meal with Y2 - Y3 and from Y4 - Y6 we cook two different savoury meals.

[Wirral's Homeless Website](#)

### Curriculum Coverage

Each class should undertake at least three Design and Technology units per year. One of these must be a **Food** project and the others can be selected from:

Textiles

Structures

Mechanisms (KS1)

Electrical or Mechanical Systems (KS2)

To help guide teachers with planning please see the example long-term plan below:

	Autumn	Spring	Summer
F2	Picnic blanket for The Three Bears.  Christmas Ginger Biscuits		Special Sunhat for Barnaby Bear
Y1	Castle	Moving Pictures	Caribbean Fruit Cocktail
Y2	Clay Picture Frame	Make a salad	Puppets
Y3	Roman Chariots using axles	Viking bags (link to famous designers)	Dips and Dippers Around the World
Y4	Stone Age Bread (link to famous bakers)	Mighty Mascot	Photo Frame to Nature
Y5	Rocketship	Earthquake Shelter	Subway sandwiches and packaging
Y6	Anderson Shelters	Fairground Rides (link to famous engineers)	Willy Wonka's Fair Trade Cookies + Banish Broken Biscuits - Packaging

### Progression of Skills

To see how Design and Technology skills progress throughout the year groups a Skills Progression Framework can be located on our website or at the bottom of this document.

### Health and Safety

Teachers need to accept responsibility for planning safe activities for D.T. This can be achieved by:

- Teaching children how to use tools and equipment safely.
- Making sure the children understand the importance of safety procedures.
- Reminding the children at the beginning of each lesson of the correct use of tools and equipment.
- Making sure all tools are used in the classroom under adult supervision.

The general teaching requirement for health and safety applies in this subject.

**Progression of skills document**

	Foundation 2	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Developing, planning and communicating ideas.</b>	<p>Explain what they making and which materials they have used</p> <p>Select materials from a small range that will meet a simple design criteria e.g. rough</p> <p>Select and name the tools needed e.g. scissors and paper</p> <p>Explore ideas by rearranging materials</p> <p>Describe simple models or drawings of ideas and intentions</p> <p>Discuss their work as it develops</p>	<p>Begin to draw on their own experiences to help generate ideas</p> <p>Begin to understand the development of existing products: What they are for, how do they work, what materials have been used</p> <p>Start to suggest ideas and explain what they are going to do</p> <p>Identify a target group for what they intend to design and make</p> <p>Model their ideas on card and paper</p> <p>Develop their design ideas by using their research</p>	<p>Start to generate ideas by drawing on their own and other people's experiences</p> <p>Develop their design ideas through discussions, observation, drawing and modelling</p> <p>Identify a purpose for what they intend to design and make</p> <p>Identify simple design criteria</p> <p>Make simple drawings and label parts</p>	<p>Generate ideas for an item, considering its purpose and the user/s</p> <p>Identify a purpose and establish criteria for a successful product</p> <p>Plan the order of their work before starting</p> <p>Explore, develop and communicate design proposals by modelling ideas</p> <p>Make drawings with labels when designing</p> <p>Learn about designers who have developed ground-breaking products</p> <p>Start to understand whether products can be recycled or reused</p>	<p>Generate ideas, considering the purposes for which they are designing</p> <p>Make labelled drawings from different views showing specific features</p> <p>Develop a clear idea of what has to been done, planning how to use materials, equipment and processes.</p> <p>Be able to suggest alternative methods of making, if the first attempts are unsuccessful</p> <p>Evaluate products and identify criteria that can be used for their own designs</p> <p>Learn about chefs who have developed ground-breaking products</p>	<p>Generate ideas through brainstorming and identify a purpose for their product</p> <p>Draw up a specification for their design – link with Mathematics and Science</p> <p>Develop a clear idea of what has to been done, planning how to use materials, equipment and processes.</p> <p>Be able to suggest alternative methods of making, if the first attempts are unsuccessful</p> <p>Apply a range of finishing techniques, including those from art and design</p> <p>Use results of investigations, information sources, including ICT when developing ideas</p> <p>Start to understand how much products cost to make, how sustainable and innovative they are and the impact products have beyond their intended purpose</p> <p>Learn about inventors and manufacturers who have developed ground-breaking products</p>	<p>Communicate their ideas through detailed labelled drawings</p> <p>Develop a design specification – link with Mathematics and Science</p> <p>Explore, develop and communicate aspects of their design proposals by modelling their ideas in a variety of ways</p> <p>Accurately, apply a range of finishing techniques, including those from art and design</p> <p>Plan the order of their work choosing appropriate materials, tools and techniques</p> <p>Be able to suggest alternative methods of making, if the first attempts are unsuccessful</p> <p>Know how much products cost to make, how sustainable and innovative they are and the impact products have beyond their intended purpose</p> <p>Learn about engineers manufacturers who have developed ground-breaking products</p>
	Foundation 2	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6

<b>Working with tools, equipment, materials and components to make quality products</b>	<p>Begin to create their design using basic techniques</p> <p>Start to build structures, joining components together</p> <p>Look at simple hinges, wheels and axles. Use technical vocab' when appropriate.</p> <p>Begin to use scissors to cut straight and curved edges and hole punches to punch holes.</p> <p>Explore using/holding basic tools such as a saw or hammer.</p> <p>Use adhesives to join materials.</p>	<p>Make their design using appropriate techniques</p> <p>Begin to build structures, exploring how they can be made stronger, stiffer and more stable.</p> <p>Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p> <p>With help measure, mark out, cut and shape a range of materials</p> <p>Use tools e.g. scissors and a hole punch safely</p> <p>Assemble, join and combine materials and components together using a variety of temporary methods e.g. glues or masking tape</p> <p>Use simple finishing techniques to improve the appearance of their product</p>	<p>Begin to select tools and materials; use vocab' to name and describe them</p> <p>Build structures, exploring how they can be made stronger, stiffer and more stable.</p> <p>Measure, cut and score with some accuracy</p> <p>Use hand tools safely and appropriately</p> <p>Assemble, join and combine materials in order to make a product</p> <p>Cut, shape and join fabric to make a simple garment. Use basic sewing techniques</p> <p>Choose and use appropriate finishing techniques</p>	<p>Select tools and techniques for making their product e.g. i.e. construction materials.</p> <p>Measure, mark out, cut, score and assemble components with more accuracy</p> <p>Start to understand that mechanical and electrical systems have an input, process and output.</p> <p>Start to understand that mechanical systems such as levers and linkages create movement.</p> <p>Work safely and accurately with a range of simple tools</p> <p>Think about their ideas as they make progress and be willing change things if this helps them improve their work</p> <p>Measure, tape or pin, cut and join fabric with some accuracy</p> <p>Use finishing techniques strengthen and improve the appearance of their product using a range of equipment including ICT</p>	<p>Select appropriate tools and techniques for making their product</p> <p>Measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques</p> <p>Know how mechanical systems such as cams or pulleys or gears create movement.</p> <p>Understand how more complex electrical circuits and components can be used to create functional products.</p> <p>Continue to learn how to program a computer to monitor changes in the environment and control their products.</p> <p>Join and combine materials and components accurately in temporary and permanent ways</p> <p>Understand how to reinforce and strengthen a 3D framework.</p> <p>Sew using a range of different stitches, weave and knit</p> <p>Measure, tape or pin, cut and join fabric with some accuracy</p> <p>Use simple graphical communication techniques</p>	<p>Select appropriate materials, tools and techniques</p> <p>Understand how mechanical systems such as cams or pulleys or gears create movement.</p> <p>Know how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control their products.</p> <p>Understand that mechanical and electrical systems have an input, process and output.</p> <p>Measure and mark out accurately</p> <p>Use skills in using different tools and equipment safely and accurately</p> <p>Cut and join with accuracy to ensure a good-quality finish to the product</p> <p>Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT.</p>	<p>Select appropriate tools, materials, components and techniques</p> <p>Assemble components make working models</p> <p>Use tools safely and accurately</p> <p>Construct products using permanent joining techniques</p> <p>Make modifications as they go along</p> <p>Pin, sew and stitch materials together create a product</p> <p>Achieve a quality product</p> <p>Know how to reinforce and strengthen a 3D framework. Understand how mechanical systems such as cams or pulleys or gears create movement.</p> <p>Know how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and control their products.</p> <p>Understand that mechanical and electrical systems have an input, process and output.</p> <p>Use finishing techniques to strengthen and improve the appearance of their product using</p>
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							a range of equipment including ICT.
	Foundation 2	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Evaluating process and product</b>	<p>Say what they like and do not like about items they have made and attempt to say why.</p> <p>Begin to talk about their designs as they develop and identify good and bad points.</p>	<p>Evaluate their product by discussing how well it works in relation to the purpose</p> <p>Evaluate their products as they are developed, identifying strengths and possible changes they might make</p> <p>Evaluate their product by asking questions about what they have made and how they have gone about it</p>	<p>Evaluate against their design criteria</p> <p>Evaluate their products as they are developed, identifying strengths and possible changes they might make</p> <p>Talk about their ideas, saying what they like and dislike about them</p>	<p>Evaluate their product against original design criteria e.g. how well it meets its intended purpose</p> <p>Disassemble and evaluate familiar products</p>	<p>Evaluate their work both during and at the end of the assignment</p> <p>Evaluate their products carrying out appropriate tests</p>	<p>Evaluate a product against the original design specification</p> <p>Evaluate it personally and seek evaluation from others</p>	<p>Evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests</p> <p>Record their evaluations using drawings with labels</p> <p>Evaluate against their original criteria and suggest ways that their product could be improved</p>
	Foundation 2	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Food and Nutrition</b>	<p>Begin to develop a food vocabulary using taste, smell, texture and feel.</p> <p>Explore familiar food products e.g. fruit and vegetables.</p> <p>Stir, spread, knead and shape a range of food and ingredients.</p> <p>Begin to work safely</p>	<p>Begin to understand that all food comes from plants or animals.</p> <p>Explore the understanding that food has to be farmed, grown elsewhere (e.g. home) or caught.</p> <p>Start to understand how to name and sort foods into the five groups in 'The Eat well plate'</p> <p>Begin to understand</p>	<p>Understand that all food comes from plants or animals.</p> <p>Know that food has to be farmed, grown elsewhere (e.g. home) or caught.</p> <p>Understand how to name and sort foods into the five groups in 'The Eat well plate'</p> <p>Know that everyone should eat at least five portions of fruit and vegetables every day.</p>	<p>Start to know that food is grown, reared and caught in the UK, Europe and the wider world.</p> <p>Understand how to prepare and cook a variety of savoury dishes safely and hygienically.</p> <p>Begin to understand how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p> <p>Start to understand that a</p>	<p>Start to know that food is grown, reared and caught in the UK, Europe and the wider world.</p> <p>Understand how to prepare and cook a variety of savoury dishes safely and hygienically.</p> <p>Know how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p> <p>Know that a healthy diet is made up from a variety and balance of</p>	<p>Understand that food is grown, reared and caught in the UK, Europe and the wider world.</p> <p>Understand how to prepare and cook a variety of savoury dishes safely and hygienically.</p> <p>Begin to understand that seasons may affect the food available.</p> <p>Understand how food is processed into ingredients that can be eaten or used in cooking.</p> <p>Know how to use a range of techniques such as peeling, chopping, slicing,</p>	<p>Know that food is grown, reared and caught in the UK, Europe and the wider world.</p> <p>Know how to prepare and cook a variety of savoury dishes safely and hygienically.</p> <p>Understand that seasons may affect the food available.</p> <p>Know how food is processed into ingredients that can be eaten or used in cooking.</p> <p>Know different food and drink contain different substances –</p>

	<p>and hygienically.</p> <p>Start to think about the need for a variety of foods in a diet.</p> <p>Measure and weigh food items, non-statutory measures e.g. spoons, cups.</p>	<p>that everyone should eat at least five portions of fruit and vegetables every day.</p> <p>Know how to prepare simple dishes safely and hygienically, without using a heat source.</p> <p>Know how to use techniques such as cutting, peeling and grating.</p>	<p>Demonstrate how to prepare simple dishes safely and hygienically, without using a heat source.</p> <p>Demonstrate how to use techniques such as cutting, peeling and grating.</p>	<p>healthy diet is made up from a variety and balance of different food and drink, as depicted in 'The Eat well plate'</p> <p>Begin to know that to be active and healthy, food and drink are needed to provide energy for the body.</p>	<p>different food and drink, as depicted in 'The Eat well plate'</p> <p>Know that to be active and healthy, food and drink are needed to provide energy for the body.</p>	<p>grating, mixing, spreading, kneading and baking</p> <p>Begin to understand that different food and drink contain different substances – nutrients, water and fibre – that are needed for health.</p>	<p>nutrients, water and fibre – that are needed for health.</p>
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