

Year Group	Autumn		Spring		Summer	
	Autumn 1	Autumn 2	Spring 1	Spring 2	Summer 1	Summer 2
<p>Early Years Foundation Stage</p> <p>Design and Technology is embedded within the Early Years Foundation Stage Curriculum through the use of the learning environment and classroom provision. The children are given a wealth of opportunities to engage in activities, both child-initiated and adult-directed, which enable them to develop knowledge of materials, to construct with a purpose, to develop an understanding of nutrition and to use a range tools and equipment safely. During the children’s time in Early Years Foundation Stage, the essential building blocks of Design and Technology capability are established.</p> <p>Design and Technology in the Early Years Foundation Stage is incorporated into all aspects of the curriculum. However, it can primarily be classified as part of ‘Expressive Arts and Design’.</p> <p>Early Years Foundation Stage</p> <p>Expressive Arts and Design 3 and 4 year olds will be learning:</p> <ul style="list-style-type: none"> • Make imaginative and complex ‘small worlds’ with blocks and construction kits, such as a city with different buildings and a park. • Explore different materials freely, in order to develop their ideas about how to use them and what to make. • Develop their own ideas and then decide which materials to use to express them. • Create closed shapes with continuous lines, and begin to use these shapes to represent objects. <p>Expressive Arts and Design Children in Reception will be learning:</p> <ul style="list-style-type: none"> • Explore, use and refine a variety of artistic effects to express their ideas and feelings. • Return to and build on their previous learning, refining ideas and developing their ability to represent them. • Create collaboratively, sharing ideas, resources and skills 						
<p>KS1 National Curriculum aims</p> <p>Pupils should be taught:</p> <ul style="list-style-type: none"> • 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 						

Developing Ideas

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

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 use mechanisms [for example levers, sliders, wheels and axles], in their products.

Cooking and Nutrition

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

Year One		<p>Freestanding Structures <i>Design and make a piece of playground equipment.</i> Link: Geog School in the locality, Science-(materials)</p>		<p>Cooking and Nutrition <i>Preparing fruit and vegetables for a street party</i> Link: History (Royal Family)</p>		<p>Mechanisms <i>Sliders and levers</i> <i>Design an animal that moves</i> Link: Science (animals)</p>
Year Two		<p>Mechanisms <i>Wheels and axels – make a pit cart.</i> Link: History/ Geog (coal mine)</p>		<p>Cooking and Nutrition <i>Bake a traditional dish from the UK or from the non-European Country</i> Link Local Geog</p>		<p>Textiles <i>Sew a pair of mittens to keep your hands warm while exploring.</i> Link: Geog (Hot & cold places), History- (Explorers) Science-(materials)</p>

KS2 National Curriculum aims

Pupils should be taught:

- 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

Developing Ideas

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 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

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.
- 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
- 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 to prepare dishes
- Prepare and cook a variety of predominantly savoury dishes using a range of techniques.
- Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.

Year 3		<p>Mechanisms <i>Pop-up fact book</i> Link: History (stone age)</p>		<p>Cooking and Nutrition <i>Healthy and varied diet Plan and make a healthy and balanced meal.</i> <i>Prepare and cook a healthy soup.</i> Link: Science (Nutrition)</p>		<p>Textiles <i>A purse for coins</i> Link: History- Roman</p>
Year 4		<p>Structures <i>Shell structure to store trinkets</i> Link: History (Anglo Saxons)</p>		<p>Mechanical Systems <i>Pneumatics</i> <i>Make the jaw of a monster move without using your hands</i> Link: Science (Teeth & Eating)</p>		<p>Electrical Systems <i>Simple circuits and switches</i> <i>Design a reading light or night light for a person</i> Link: Science (electricity)</p>
Year 5		<p>Cooking and Nutrition <i>Create a savoury dish using chocolate or coco powder</i> Link to history - Mayans</p>		<p>Frame Structure <i>Create a pop up tuck shop for the school (waterproof)</i> Link: Geog - changes in weather</p>		<p>Electrical Systems <i>LEGO</i> <i>Signal system for a train</i> Link: History</p>

Design and Technology Long Term Plan

Year 6		<p style="text-align: center;">Cooking and Nutrition <i>Create a meal using rations available with consideration to seasonality</i> NC: History (WWII)</p>		<p style="text-align: center;">Textiles <i>Using recycled fabric to create a tablet case/mobile phone case</i> <i>Link: Science (Materials and Changing of materials)</i></p>		<p style="text-align: center;">Mechanical systems <i>Pulleys and gears</i> <i>Design a fairground ride for the summer fair</i> Link: DT</p>
As designers:	The children will be encouraged to be creative when designing and making their own products that solve real problems. They will be taught to take risks, to evaluate and improve their own products and use a variety of skills that will prepare them for the world of work.					
<i>If you would like more information about the curriculum we offer at Brooke Primary Academy, then please contact the academy office.</i>						

Design and Technology is taught in the 2nd half term of each full term e.g. Autumn 2, Spring 2, Summer 2