



Design Technology

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National Curriculum Design Technology Programmes of Study

[National Curriculum - Design and technology key stages 1 to 2 \(publishing.service.gov.uk\)](https://www.publishing.service.gov.uk/government/uploads/system/uploads/attachment_data/file/426267/national-curriculum-design-technology-key-stages-1-to-2.pdf)

Intent

Design Technology is a practical subject in which the children at Raunds Park Infant School are taught to use their creativity and imagination to design and make products that solve real and relevant problems within a variety of topic-based contexts. We follow the EYFS Statutory Framework and the National Curriculum. The curriculum will develop an acquisition of knowledge and skills with each session encouraging the children to learn to think and contribute creatively to problems working independently and as part of a team. Where possible cross curricular links to other disciplines such as mathematics, science, computing and art will be made. To enable the children to become innovators, enterprising and resourceful. They will be encouraged to be creative, take risks, explore, investigate and experiment to innovate and discover. The children will also be given opportunities to learn about, reflect and evaluate technology products to develop a critical understanding of its impact on daily life and the wider world.

Implementation

At Park, we teach a skills-based design technology curriculum primarily linked to our topic work. This can be found on our curriculum map. The school uses a variety of teaching and learning styles in the design technology lessons relating to the abilities and experience of the pupils. Our teaching at all levels includes opportunities for children to work individually, or in larger groups. In Reception we celebrate the children's work in our photo gallery and in Key Stage 1 each child has a topic book to show the journey towards creating their final piece of work for the topic.

Impact

The impact of this curriculum will lead to each pupil progressing in their knowledge and skills throughout the school. The pupils will therefore leave Raunds Park Infant school with an enjoyment of and confidence in design and technology. They will gain the creative, technical and practical expertise needed to perform everyday tasks confidently. The children start to understand the principles of nutrition and learn the basic skills of cooking.

Design Technology Curriculum Overview

	Autumn Term	Spring Term	Summer Term
Year 1	 <p>Shade and Shelter</p> <p>This project teaches children about the purpose of shelters and their materials. They name and describe shelters and design and make shelter prototypes. Children then design and build a play den as a group and evaluate their completed product.</p>	 <p>Taxi</p> <p>This project teaches children about wheels, axles and chassis and how they work together to make a vehicle move.</p>	 <p>Chop, Slice, Mash</p> <p>This project teaches children about sources of food and the preparatory skills of peeling, tearing, slicing, chopping, mashing and grating. They use this knowledge and techniques to design and make a supermarket sandwich according to specific design criteria.</p>
Year 2	 <p>Remarkable Recipes</p> <p>This project teaches children about sources of food and tools used for food preparation. They also discover why some foods are cooked and learn to read a simple recipe. The children choose and make a new school meal that fulfils specific design criteria.</p>	 <p>Beach Hut</p> <p>This project teaches children about making and strengthening structures, including different ways of joining materials.</p>	<div style="display: flex; flex-direction: column;"> <div style="margin-bottom: 10px;">  <p>Cut, Stitch, Join</p> <p>This project teaches children about fabric home products and the significant British brand Cath Kidston. They learn about sewing patterns and using a running stitch and embellishments before making a sewn bag tag.</p> </div> <div>  <p>Push and Pull</p> <p>This project teaches children about three types of mechanism: sliders, levers and linkages. They make models of each mechanism before designing and making a greetings card with a moving part.</p> </div> </div>

What the children Experience

- **Foundation Stage**

The children at this stage are given space, materials and encouragement. They explore the textures, movement, feel and look of different media and materials. Each day there is access to junk modelling and simple DT skills are taught (see Design Technology book). Over the course of the year, they are exposed to a wide variety of design technology including food preparation and cooking. Our environment is set up to promote independence with many resources freely accessible for the children to use creatively.

- **Key Stage 1**

Design technology is taught as part of our topic-based work where appropriate. Through a variety of creative and practical activities the children are taught a progression of knowledge, understanding and skills needed to engage in the process of designing and making. The children across the school design and create products which consider function and purpose. Each year group focuses on either a construction, textile or cooking and nutrition design and technology project each long term and follow the design process of 'research- design- make- evaluate.' A progression of key design and technology vocabulary is introduced each lesson.

When designing and making, the children are taught to:

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, drawing, templates, mock ups, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and where appropriate 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:

- explore, investigate and analyse and evaluate 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:

- build structures, exploring and apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- explore, understand and use mechanical systems in their products [for example, sliders, wheels, axles, 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.

At Raunds Park we believe that learning how to cook is a crucial life skill, which enables children to feed themselves and others affordably and well, now and later in adult life. Each year group across the school engages in learning about cooking and nutrition during one term. During these sessions they are taught how to cook and apply the principles of nutrition and healthy eating.

The children are taught to:

- Use, understand and apply the basic principles of a healthy and varied diet to prepare dishes.
- Understand where food comes from.
- Prepare food using a range of preparation techniques and equipment.

Key skills and knowledge for design and technology has been mapped across the school within the curriculum map below to ensure the progression of skills and knowledge throughout the children's primary school education. At Raunds Park design and technology lessons are taught as a block so that children's learning is focused throughout each unit of work. The children will be taught this subject by the class teacher during one afternoon session for three terms, alternating the subject with Art and Design.

- **SEND**

Lesson are planned in advance and consider points where learners may struggle and include strategies to Scaffold Learning.

Supporting children with poorer fine motor skills: Consider hand over hand support and specialised equipment e.g. scissors.

Supporting children who struggle to access lessons because of literacy difficulties: Provide visual aids to enable learners to understand new vocabulary and to identify equipment. Use strategies such as modelling, demonstrating the step-by-step processes.

Supporting children who struggle to retain vocabulary: Ensure that the vocabulary becomes embedded by referring to it regularly during lessons and whilst modelling.