



# DESIGN TECHNOLOGY CURRICULUM

# Design Technology Overview

## INTENT

Design and technology is an inspiring and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values.

Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of our children.

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.

## IMPLEMENTATION

Each unit of work is based around the development of previously learned skills and areas of study. In KS1, areas include construction materials, textiles, food, mechanical components and in KS2 only, electrical components.

The progression of each unit involves the development of activities:

- **Investigate and evaluate activities** where children learn from a range of existing products and find out about D&T in the wider world.
- **Focussed tasks** where specific technical knowledge, designing skills and making skills are introduced, modelled and explored.
- **Design, make and evaluate assignments** where children create functional products by applying the learned skills, having users and purposes in mind.

To ensure there is essential scope, coherence and sequencing to support teacher expertise, we make use of the DT Association's 'Project on a Page'.

## EYFS

In EYFS, much of DT is based on exploring and handling different materials and joining them together using simple techniques and glue. Children will learn how to handle scissors and knives, helping to develop the fine motor skills, which are essential in the effective handling of tools. Children will learn simple skills in cooking, using implements to mix and serve food. Hygiene will be an essential part of this learning. Children's ability to explain and talk about their work is also an important expectation.

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Year 1	<b>Mechanisms</b> Sliders and Levers	<b>Structures</b> Freestanding structures	<b>Food</b> Preparing fruit and vegetables (including cooking and nutrition requirements for KS1)
	<b>Additional pre-skills in sewing – simple stitch using binka</b>		
Year 2	<b>Mechanisms</b> Wheels and axles	<b>Textiles</b> Templates and joining techniques	<b>Food</b> Preparing fruit and vegetables (including cooking and nutrition requirements for KS1)
	<b>Additional paper activities involving book making – pop ups, slides, levers and lift the flaps</b>		
Year 3	<b>Mechanical systems</b> Pneumatics	<b>Structures</b> Freestanding structures using computer-aided design	<b>Food</b> Healthy and varied diet (including cooking and nutrition requirements for KS2)
	<b>Additional skills in sewing – variety of stitches using binka</b>		
Year 4	<b>Textiles</b> 2D shape to 3D product	<b>Electrical systems</b> Simple programming and control	<b>Food</b> Healthy and varied diet (including cooking and nutrition requirements for KS2)
	<b>Additional skills in structures and joining techniques linked to electrical systems project</b>		
Year 5	<b>Structures</b> Frame structures	<b>Mechanical systems</b> Cams	<b>Food</b> Celebrating culture and seasonality (including cooking and nutrition requirements for KS2)
	<b>Additional pre-skills in textiles – fastenings</b>		
Year 6	<b>Textiles</b> Using computer aided design in textiles	<b>Electrical systems</b> Monitoring and control	<b>Food</b> Celebrating culture and seasonality (including cooking and nutrition requirements for KS2)

## Health, safety and hygiene

Although the national curriculum does not make references to safety and hygiene, we ensure that we teach children to work safely, using tools, equipment, materials, components and techniques appropriate to the task. In food technology, we ensure that planned activities do not entail children with allergies tasting or handling ingredients or products that will affect their health.