



Design & Technology aims

The national curriculum for Design 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.

Intent

Design and technology is a practical subject designed to be diverse, inspiring and rigorous. At St Peter's, pupils are encouraged to use their imagination and creative skills to design, produce and evaluate products that are relevant to the real world in a variety of contexts, allowing them to understand the world more clearly – to recognise that they have the opportunity to make changes for the better. Pupils will develop a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering and art in their learning. Built into this is an inherent belief in sustainability and environmental awareness; children are exposed to problems that require them to reuse materials and create sustainable products. In addition, our focus on healthy eating promotes a deep understanding of the role seasonal, healthy food can play in promoting healthy lifestyles.

We use CUSP DT as the vehicle to support our planning.

Children are developed as communicators through the rich vocabulary diet of our design and technology curriculum and the language rich environment within lessons, where there is a relentless focus on oracy.



Design and technology enables children to reach goals, setting themselves targets to meet a brief and challenging themselves to solve problems.



Through moments of awe and wonder, children's eyes are opened to possibilities they may not have realised previously. They begin to understand the power we have to change the world around us. .



Through the use of carefully structured questions, we enable children to make real life links to the work they complete in design and technology, giving them the understanding of how design and technology enriches lives.



Implementation

At St Peter's, design and technology is taught in blocks, with each block covering a particular set of disciplines, including **food and nutrition, mechanisms, structures, systems, electrical systems, understanding materials** and **textiles**. Central to the learning modules are activities designed to develop pupils' oracy and vocabulary skills to enable them to use the language associated with design and technology meaningfully when talking about their work and the work of others.

CUSP, which is used as a vehicle for our planning and teaching, is framed around a key question, to provide purpose, engagement and connection with prior knowledge. Subject coverage is planned sequentially and with a clear rationale for making connections with prior learning. Learning over time is carefully sequenced to enable children to purposefully layer learning from previous sessions as well as previous studies to facilitate the acquisition and retention of key knowledge and skills.

Working as a Designer			
Design	Make	Evaluate	Apply
The art or process of deciding how something will look or work.	Create something by combining materials or putting parts together.	Form an opinion of the value or quality of something after careful thought.	Use something or make something work in a particular situation.

Subject skills

As well as ensuring children are taught key knowledge, each module is designed to offer pupils the opportunity to develop their skills as designers by focusing on the aspects: **design, make, evaluate** and **apply**.

These skills enable pupils progress to be made more broadly and will support teachers in understanding the progress of their pupils.

Planning and Continuing Professional Development

The design and technology curriculum provides a sequence of skeleton lesson plans, contextual reference materials, vocabulary modules focusing on language of emotion, explanatory videos and annotated exemplifications. This excellent CPD enables staff to plan effective provision based on excellent curriculum resources. Teacher videos complement the content in each block and provide clear instruction about relevant techniques, skills and methods. The exemplifications can be used to inform assessment of pupil outcomes and to support teachers in developing their own subject knowledge. Teachers are also provided with a list of materials and resources that they will need to deliver each block.

Each lesson builds in small steps upon the previous, with teaching informed by continuous assessment of and for learning and misconceptions addressed at point in time. Teachers plan lessons using a mastery teaching approach, following the sequence of learning indicated below:



Vocabulary

Vocabulary is an essential building block to enable children to access the curriculum; central to the learning modules are activities designed to develop pupils' oracy and vocabulary skills to enable them to use the language associated with design and technology meaningfully when talking about their work and the work of others. Teachers ensure that all children understand the key vocabulary needed to access the learning, with careful scaffolding for children with SEND.

Impact

Throughout their time at St Peter's, children are provided with the skills to become enthusiastic designers, with a strong understanding of the design, make, evaluate and apply process. They are able to apply these skills to a range of contexts with confidence and can tackle real life problems with resilience.

Final pieces within design and technology sequences shows the children's understanding of the overall question and gives them the opportunity to apply their learning to a real-life scenario. Learning sequences show that over time, children know more and can apply this knowledge across their wider learning in design and technology, understanding the links between different aspects of the curriculum.

By the end of year 6, children at St Peter's are able to securely meet the aims of the National Curriculum. All children have been part of the rich and active diet of design and technology teaching and are ready to continue their learning as they progress to secondary school.

Long Term Overview

Year 3	Food and Nutrition <i>Block D</i> Food as Medicine <i>How does food affect your body and mind?</i>	Systems <i>Block E</i> How things are powered <i>How are things powered?</i>	Structures <i>Block F</i> Spanning gaps <i>What makes a bridge strong?</i>
Year 4	Food and Nutrition <i>Block A</i> Ultra-processed food <i>What's really in your food?</i>	Mechanisms <i>Block B</i> Hinges <i>How many ways are there to open a door?</i>	Textiles <i>Block C</i> Fixings and fastenings <i>How do you keep a tea towel from slipping off a hook?</i>
Year 5	Structures <i>Block E</i> Developing structures fit for purpose <i>How are frames strengthened, reinforced and made rigid?</i>	Food and Nutrition <i>Block D</i> Cultural influences on diet <i>What can you learn from different cultures' diets?</i>	Mechanisms <i>Block F</i> Pulleys and gears <i>How can you lift a car onto a roof?</i>
Year 6	Electrical systems <i>Block E</i> Complex switches and circuits <i>Can a switch perform more than one function?</i>	Textiles <i>Block F</i> Sustainable materials <i>How can you reduce, recycle and repurpose?</i>	Food and Nutrition <i>Block C</i> Food and mood <i>Does food affect the way you feel?</i>

