

ST. BERNADETTE'S CATHOLIC PRIMARY SCHOOL

Design and Technology Curriculum



Learn to Love, Love to Learn

Mr Wayne and Mrs McGrath 2022/2023



Design Technology

St Bernadette's Catholic Primary School is a beacon of hope and a place that offers children an education rich in memorable experiences. We aim to provide all children with a broad and balanced curriculum, which prepares them for life beyond the primary classroom. We encourage children to use their creativity, imagination, and the ability to combine skills, knowledge, concepts, and values to enable them to research, design and make products that solve real and relevant problems. They do this within a variety of contexts, whilst considering their own and others' needs, wants, and values. Design and Technology is an inspiring, rigorous, and practical subject, which encourages children to learn, to think and to solve problems both as individuals and as members of a team. D&T allows children to be risk takers and innovators and gives them the opportunity to develop valuable life skills that can be applied across the curriculum and daily life. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth, and well-being of the nation.

At St Bernadette's Catholic Primary School, the 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 to design and make high-quality prototypes and products for a wide range of users.
- Critique, evaluate and test their own ideas and products and that of others.
- Understand and apply the principles of nutrition and learn how to cook.
- Be aware of health and safety procedures when conducting practical work.

Implementation

We believe that the delivery of the Design and Technology curriculum is as important as its construction. Therefore, subjects' leaders have implemented the following:

- A knowledge organizer that outlines knowledge, skills, and key vocabulary, which all children can access. These documents also provide support for teacher to evaluate against.
- Detailed and coherent flipcharts based on extensive research, that support teachers and pupils with the D&T cycle.
- A detailed booklet that works through the D&T cycle of research, design, make and evaluate. These are used to support teachers and pupils with their D&T journey.
- A scenario or problem that is related to the Topic of each year band.
- A progression of skills document, which ensures that skills are developed in a logical sequence.
- A cycle of lessons, which carefully plans for progression and depth. Key skills are revisited and developed using what they have previously learnt as a foundation, with an emphasis on the life skills such as cooking and sewing.
- A series of CPD to ensure that staff have effective subject knowledge and are confident with delivering high quality Design and Technology lessons.



Teachers have implemented/ ensured the following:

- High expectations for all pupils.
- Quality teaching which enables all pupils to acquire key techniques, skills and vocabulary.
- The fluent application of skills and critical and innovative thinking, with a growing independence.
- Facilitation of appropriate discussion/ evaluation, in which all children are encouraged to engage.
- Assessing understanding and addressing misconceptions.
- The delivery of planning is based on assessment of the children's knowledge and driven by the emerging ideas/needs of the class.

Impact

Key Stage One	Key Stage Two
<p>A Design and Technology Expert by the end of Key Stage One will...</p> <p>...know:</p> <ul style="list-style-type: none"> • How to design purposeful, functional, appealing products for themselves and other users based on design criteria • A range of tools and equipment to perform practical tasks e.g., cutting, chopping, joining, sawing, mixing, threading. • How to use materials and components to construct products. • The purpose of different mechanisms e.g., levers, sliders, wheels, and axles • What qualities makes a product effective • About effective food hygiene and the importance of a balanced diet. <p>...be able to:</p> <ul style="list-style-type: none"> • Communicate ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology • Build structures, exploring how they can be made stronger, stiffer and more stable • Evaluate products • Use tools to perform practical tasks e.g., mixing, sieving etc. • Showcase a mechanical moon buggy, a puppet, a cupcake, a moving picture, a diorama, and an edible house. 	<p>A Design and Technology Expert by the end of Key Stage Two will...</p> <p>...know:</p> <ul style="list-style-type: none"> • The main stages within DT: research, design, create and evaluate. • Key terminology such as exploded diagrams, prototypes, butt joint, etc. • A range of materials and components and select them according to their functional properties and aesthetic qualities. • The names and uses of different mechanisms such as CAMs. • Key events and significant people. • Materials and components which strengthen, stiffen, and reinforce more complex structures • The components within an electrical system. • How to create their own success criteria based on research and a given scenario. <p>...be able to:</p> <ul style="list-style-type: none"> • Use research and develop designs • Generate and develop their ideas through discussion, annotated sketches etc • Select from and use a wider range of tools and equipment to perform practical tasks • Select from and use a wider range of materials and components according to their functional properties and aesthetic qualities • Evaluate their ideas and products • Apply their understanding of how to strengthen, stiffen and reinforce more complex structures



Understand and use mechanical systems in their products

- Understand and use electrical systems in their products
- Apply their understanding of computing to program, monitor and control their products
- Showcase a WW2 CAMs toy, a wartime carrot cake, a stuff Tudor toy, a Viking Longhouse, an Anglo-Saxon brooch, a Greek temple, an Egyptian shaduf, a stone age money bag, a Mayan salsa dip and a light up titanic model.