St Cecilia's Catholic Primary School
Design and Technology Policy

"Good buildings come from good people, and all problems are solved by good design."
Stephen Gardiner

Mission Statement

Rooted in gospel values St Cecilia's Catholic School Community lives together, learns together, loves together.

Rationale

At St Cecilia's Catholic Primary School, we are all designers and technologists! We want our pupils to appreciate design and technology. We want them to have no limits to what their ambitions are and grow up wanting to be architects, graphic designers, chefs or carpenters. Offering a high quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation. This is rooted in the gospel values of our school community and is embodied in our mission "lives together, learns together, loves together". The Design and Technology curriculum has been carefully designed so that our pupils develop their designing knowledge and skills. We want all of our pupils to remember their Design and Technology learning in our school, to cherish these experiences and embrace the opportunities they are presented with.

Intent

In Design and Technology, we aim to inspire pupils to be creative and innovative thinkers who have an appreciation for the product design cycle through ideation, creation, and evaluation.
At St Cecilia's, we want our pupils to develop the confidence to take risks, through drafting design concepts, modelling and testing and to be reflective learners who evaluate their own work and the work of others.
We aim to, wherever possible, link work to other disciplines such as reading, mathematics, science, computing and art. We want to allow children to have high

expectations and aspirations, through creating opportunities for them in the wider world. Through the DT curriculum, children should be inspired by engineers, designers, chefs and architects to enable them to create a range of structures, mechanisms, textiles, electrical systems and food products with a real life purpose.

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.

Implementation

Through a variety of creative and practical activities, we teach the knowledge, understanding and skills needed to engage in an interactive process of designing and making. The children work in a range of relevant contexts (for example home, school, leisure, culture, enterprise, industry and the wider environment).

We recognise the importance of EYFS in the teaching and learning of Design and Technology. The key foundational skills and knowledge that is covered as part of the Early Years Framework plays a vital role in the development of the subject throughout school. Within EYFS, Design and Technology learning focuses on children understanding and interacting with the "made world" through exploration, problem-solving, making, fostering their understanding of materials, tools and processes, while also developing their creativity and skills.

Curriculum

EYFS

Design and technology in the EYFS is informed by and aligned to the following related Early Learning Goals:

- Personal, Social and Emotional Development - Self-Regulation

-Set and work towards simple goals, being able to wait for what they want and control their impulses when appropriate.
-Give focused attention to what the teacher says, responding appropriately even when engaged in activity.
- Ability to follow instructions involving several ideas or actions.

- Physical Development -Fine Motor Skills

-Use a range of small tools, including scissors, paint brushes and cutlery.
-Begin to show accuracy when drawing.

- Expressive Arts and Design -Creating with Materials

-Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.
-Share their creations, explaining the processes they have used.

The staff team plan for children to experience creative opportunities and develop key skills and techniques within the EYFS curriculum. There is a focus on developing fine motor skills and learning how to plan, design and produce the finished project. The knowledge and skills acquired and developed in the EYFS provides the foundations of those identified in subsequent years. Nursery and Reception classes are, where appropriate, included in whole school projects, workshops, events and competitions associated with Design and Technology. The Early Years Curriculum document outlines how Design and Technology is taught within the programme of study.

National Curriculum

The National Curriculum organises the Design and Technology attainment targets under 5 subheadings:

- Design
- Make
- Evaluate
- Cooking and Nutrition
- Technical knowledge

Our curriculum overview shows which of our units cover each of the NC attainment targets as well as each of the five strands. All classes have scheduled Design and Technology lessons each term and are also taught alongside other curriculum subjects.

KS1

When designing and making, pupils should be taught to:

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 characteristics

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
- understand and apply the principles of a healthy and varied diet
- prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed

KS2

When designing and making, pupils should be 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, annotated sketches, cross sectional 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
- understand and use electrical systems in their products
- apply their understanding of computing to programme, monitor and control their products

Cooking and Nutrition

- use the basic principles of a healthy and varied diet to prepare dishes
- understand where food comes from
- understand and apply the principles of a healthy and varied diet
- prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed

Impact

We ensure that our children

- 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 and 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. Children will design and make a range of products. A good quality finish will be expected in all design and activities made appropriate to the age and ability of the child

Children learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop an understanding of its impact on daily life and the wider world.

Teaching and learning

Design and Technology will engage the children in a broad range of designing and making activities which involve a variety of methods of communication, speaking, designing, drawing, assembling, making, writing, taking photographs and computer technology. Projects are taught in half termly units which allows for more effective learning in which teachers can focus on teaching and developing Design and Technology skills, allowing children to develop their ideas and techniques. Units of work have been selected and planned to ensure a balance of materials, skills, knowledge and understanding throughout each Key Stage.

Our curriculum overview shows which of our units cover each of the NC attainment targets as well as each of the five strands. Through our Design and Technology scheme, pupils respond to design briefs and scenarios that require consideration of the design process.

Key areas are revisited again and again with increasing complexity, allowing pupils to build on their previous learning.

Assessment

Children's skills will be assessed and developed by the teacher during lessons. At the end of each unit an assessment grid is then used to record children's

attainment. Displays and working walls are used to support learning and reflect a range of work across key stages, by children of all abilities.

Planning and Resources

At St Cecilia's Catholic Primary School, we use the 'Plan Bee' scheme to support when planning and delivering Design and Technology lessons in KS1 and KS2. The 'Plan Bee' scheme is a structured, national curriculum-aligned resource used for teaching Design and Technology in schools. It provides a clear framework and detailed lesson plans, supporting our teachers in delivering effective Design and Technology lessons that build upon previous learning and enhance children's long-term memory retention. Alongside the scheme, collaboration with colleagues and Design and Technology Lead allows for adaptations to be made to lessons and progression mapping where needed. Resources are purchased by teachers and DT Lead and any further materials needed for the design, construction and evaluation processes are sourced through recycled materials. Children are taught to use tools and equipment in a sensible, safe and efficient manner.

Hygiene, Health and Safety

Children may be using tools and materials that could possibly present a hazard if they are not used correctly and with care. The correct safe methods will be modelled to the children and they will be made aware of the risks involved if equipment is not used safely. Teachers will promote these in order to ensure the health and safety of their pupils. Children will also be taught the importance and necessity of looking after equipment by using it correctly and keeping it clean and tidy. To ensure safety at all times pupils should:

- Collect tools and equipment safely
- Follow the clear, concise instructions given
- Only move around the room when it is absolutely necessary
- Wear safety equipment if it is required

Equal Opportunities and Inclusion

Whole school policy on equal opportunities will be adhered to in Design and Technology activities. Children with special needs or physical disabilities will be differentiated for and supported appropriately, to ensure development of skills and equal access to the Design and Technology curriculum.

Role of the Subject Leader

The subject leader is responsible for:

- Raising the profile of the subject.
- Ensuring that resources are sufficient and appropriate.
- Replacing and acquiring new resources.
- Modelling teaching.
- Monitoring teaching.
- Ensuring that the progression of key skills throughout the school are planned for.
- Assisting colleagues to analyse assessment information and from this the planning and delivery of future lessons to meet needs/address gaps.
- Improving the subject through analysing the strengths and weaknesses and writing an improvement plan each year.