Design & Technology Policy
2024-2025

I am a
child
of God

1 John 3:1

St Gerard's Catholic Primary School

"Guided by God, St Gerard's Catholic Primary and Nursery School is an inspiring and aspirational community where we learn to love, hope, dream and achieve."

SAFEGUARDING STATEMENT

"St Gerard's Catholic Primary and Nursery School is committed to safeguarding and promoting the welfare of children and young people and expects all staff and volunteers to share this commitment".

Policy Date: September 2024
Policy Status: Statutory
Policy Review Cycle: Annual
Next Review Date: September 2025

Design and Technology is one of the foundation subjects of the National Curriculum and therefore it is expected that all children will follow it.

Introduction

Design and Technology is the process of designing, making and evaluation of products fit for a purpose or improving, refining and extending the use of existing products. It involves the creative application of the principles of science to solve practical problems. It is the responsibility of each Class Teacher to deliver the skills as per the National Curriculum so ensuring a complete coverage of the Programmes of Study by the end of Y6.

Purpose of Study

Design and Technology is an inspiring, rigorous, 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. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing, and art. Pupils learn how to take risks, become 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 the nation.

Aims and Objectives

Design and Technology prepares children to take part in the development of tomorrow's rapidly changing world. Creative thinking encourages children to make positive changes to their quality of life. The subject encourages children to become autonomous and creative problem-solvers, both as individuals and as part of a team. It enables them to identify needs and opportunities and to respond by developing ideas and eventually making products and systems. Through the study of design and technology they combine practical skills with an understanding of aesthetic, social and environmental issues, as well as functions and industrial practices. This allows them to reflect on and evaluate present and past design and technology, its uses and its impacts. Design and technology helps all children to become discriminating and informed consumers and potential innovators.

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.

Teaching and Learning Style

The school uses a variety of teaching and learning styles in Design and Technology lessons. The principal aim is to develop children's knowledge, skills and understanding in design and technology. Teachers ensure that the children apply their knowledge and understanding when developing ideas, planning and making products and then evaluating them. We do this through a mixture of whole class teaching and individual/group activities. Within lessons, we give children the opportunity both to work on their own and to collaborate with others, listening to other children's ideas and treating these with respect. Children critically evaluate existing products, their own work and that of others. They have the opportunity to use a wide range of materials and resources, including computing resources.

In all classes, there are children of differing ability. We recognise this fact and provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. We achieve this through a range of strategies:
- setting common tasks that are open-ended and can have a variety of results;
- setting tasks of increasing difficulty where not all children complete all tasks;
- providing a range of challenges through the provision of different resources;
- using additional adults to support the work of individual children or small groups.

Design and Technology Curriculum Planning

Design and technology is a foundation subject in the National Curriculum.

We carry out the curriculum planning in Design and Technology in three phases: long-term, medium-term and short-term. The long-term plan maps out the units covered in each term during the key stages. The medium term plan outlines the details of the skills due to be taught. The short term plan fits into the foundation planning outlining the objective to be covered and the way the skills will be taught.

In some cases, Design and Technology projects will be taught to cover the skills outlined in the Medium and long term planning.

We plan the activities in Design and Technology so that they build upon the prior learning of the children. We give children of all abilities the opportunity to develop their skills, knowledge and understanding and we also build planned progression into the scheme of work, so that the children are increasingly challenged as they move through the school.

The Foundation Stage

We encourage the development of skills, knowledge and understanding that help Reception children make sense of their world as an integral part of the school's work. As Reception Class is part of the Foundation Stage of the National Curriculum, we relate the development of the children's knowledge and understanding of the world to the objectives set out in the current EYFS framework. These underpin the curriculum planning for children aged three to five. This learning forms the foundations for later work in Design and Technology. These early experiences include asking questions about how things work, investigating and using a variety of construction kits, materials, tools and products, developing making skills and handling appropriate tools and construction material safely and with increasing control.

We provide a range of experiences that encourage exploration, observation, problem solving, critical thinking and discussion. These activities, indoors and outdoors, attract the children's interest and curiosity.

Contribution of Design and Technology to Teaching in Other Curriculum Areas

English
Design and Technology contributes to the teaching of English in our school by providing valuable opportunities to reinforce what the children have been doing during their English lessons. The evaluation of products requires children to articulate their ideas and to compare and contrast their views with those of other people. Through discussion children learn to justify their own views and clarify their design ideas.

Mathematics
In Design and Technology there are many opportunities for children to apply their mathematical skills through choosing and using appropriate ways of calculating measurements and distances. They learn how to check their results of calculations for reasonableness and learn how to use an appropriate degree of accuracy for different contexts. Children learn to measure and use equipment correctly. They apply their knowledge of fractions and percentages to describe qualities and calculate proportions. The children will carry out investigations and in doing so; they will learn to read and interpret scales, collect and present data and draw their own conclusions. They will learn about size and shape and make practical use of their mathematical knowledge in order to be creative and practical in their designs and modelling.

Computing
We use computing to support Design and Technology teaching, when appropriate. Children use software to enhance their skills in designing and making and use draw-and-paint programs to model ideas and make repeating patterns. The children also use computing resources to collect information and to present their designs through draw-and-paint programs.

Personal, Social and Health Education (PSHE) and Citizenship
Design and Technology contributes to the teaching of personal, social and health education and citizenship. We encourage the children to develop a sense of responsibility in following safe procedures when making things. They also learn about health and healthy diets. Their work encourages them to be responsible and to set targets to meet deadlines, and they also learn through their understanding of personal hygiene, how to prevent disease from spreading when working with food.

Spiritual, Moral, Social and Cultural Development

The teaching of Design and Technology offers opportunities to support the social development of our children through the way we expect them to work with each other in lessons. Our groupings allow children to work together, and give them the chance to discuss their ideas and feelings about their own work and the work of others. Through their collaborative and co-operative work across a range of activities and experiences in design and technology, the children develop respect for the abilities of other children and a better understanding of themselves. They also develop a respect for the environment, for their own health and safety and for that of others. They develop their cultural awareness and understanding, and they learn to appreciate the value of differences and similarities. A variety of experiences teaches them to appreciate that all people are equally important, and that the needs of individuals are not the same as the needs of groups.

Teaching Design and Technology to Children with Special Needs (SEND)

We teach Design and Technology to all children, whatever their ability. Design and Technology also forms part of our school curriculum policy to provide a broad and balanced education to all children. Teachers provide learning opportunities that are matched to the needs of children with learning difficulties.

Assessment and Recording

Teachers assess children's work in design and technology by making assessments as they observe them working during lessons. They record the progress that children make by assessing the children's work against the learning objectives for their lessons. At the end of a unit of work, teachers make a judgement against the National Curriculum levels of attainment. Teachers then use the levels that they record to plan the future work of each child and to make an annual assessment of progress for each child, as part of the annual report to parents.

The design and technology subject leader keeps photographic evidence of the children's work in a portfolio. This demonstrates what the expected level of achievement is in design and technology in each year of the school.

Health and Safety

The general teaching requirement for health and safety applies in this subject. We teach children how to follow proper procedures for food safety and

hygiene. Hot melt glue guns, Stanley knives and staple guns should not be used by the children. Cool melt glue guns should be used with care.

Monitoring and review

The monitoring of the standards of children's work and of the quality of teaching in Design and Technology is the responsibility of the SLT and Design and Technology Subject Leader. The work of the subject leader also involves supporting colleagues in the teaching of Design and Technology and being informed about current developments in the subject.

Agreed by Governing Body:
Date of next Review: September 2024