

THE HOLY FAMILY CATHOLIC PRIMARY SCHOOL

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Design and Technology



OFSTED July 2019

'Pupils feel safe in school and believe that the adults take good care of them.'

'The quality of teaching, learning and assessment in the school is strong.'



**CATHOLIC SCHOOLS
INSPECTORATE**
THE NATIONAL FRAMEWORK FOR THE INSPECTION OF CATHOLIC SCHOOLS, COLLEGES AND ACADEMIES

Catholic Schools Inspection February 2023

'The visitor is left in no doubt that this is a loving Catholic school that prides itself on a genuine, warm welcome.'

'Staff provide the highest level of pastoral care; there is a deep commitment to the most vulnerable.'

'Prayer is central to life in Holy Family.'

At The Holy Family School we are committed to Safeguarding Children

As a family we live, love, learn and celebrate with Jesus

Design and Technology Policy

Intent

At The Holy Family School, we aim for the children to use their creativity and imagination to design and make products in a range of contexts. Design and technology is taught through a combination of defined design and technology projects aimed at supporting pupils in developing their appreciation for the product design cycle through ideation, creation and evaluation. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. They evaluate designers and existing products to inspire them to create their own ideas and designs.

Our objectives in the teaching of design and technology are:

- to give children the opportunity to take part in creative and practical activities.
- to understand the importance of design and technology in the wider world.
- to develop imaginative thinking in children and to enable them to talk about what they like and dislike when designing and making things.
- to enable children to talk about how things work, and to draw and model their ideas.
- to explore computing as a means of design.
- to encourage children to be analytical and critical when they are considering and analysing products.
- to encourage children to select appropriate materials, tools and techniques for making a product.
- to follow safe procedures when using equipment.
- to explore attitudes towards the made world and how we live and work within it.
- to develop an understanding of technological processes and products, their manufacture and their contribution to society.
- to foster enjoyment, satisfaction and purpose in designing and making things.

Implementation

At The Holy Family School, we use a skills based approach to teaching and learning using objectives taken from the National Curriculum and delivered through our selected scheme - KAPOW. The scheme has a clear progression of skills and knowledge within each of the strands planned for: design, make, evaluate and technical knowledge/cooking and nutrition. We ensure that the planned activities our children undertake are challenging, motivating, relevant and enjoyable. We give children confidence in their work by providing continual support and encouragement.

Teachers ensure that the children apply their knowledge and understanding when developing ideas, planning and making products, and evaluating them. We do this through a mixture of whole class teaching and individual, paired or group activities. Within lessons we give the children the opportunity 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.

We recognise the fact that we have children of differing ability in all our classes, and we 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 which are differentiated by task, expected outcome and/or support from peers or adults.

Design and technology is a foundation subject in the National Curriculum. At The Holy Family School, we feel that our selected scheme of work is aligned with the national scheme of work as the basis for our curriculum planning in design and technology.

At The Holy Family School, we strive to provide a program of learning opportunities for all pupils to gain the basic knowledge and understanding, which underpin design and technology. In addition, we endeavour to provide continuity and progression for all pupils throughout the curriculum as they move through the school. We aim to ensure health and safety of all pupils during design and technology activities.

Our curriculum is carefully planned to engage and excite all our learners. Our long-term and medium-term plans focus on sequenced learning and the progression of skills, fitting in as much as possible with cross-curricular links or themes covered each term for each key stage. These plans define what we will teach so there is an appropriate balance and distribution of work across each term, as well as ensuring a progression in skills and experiences across the school.

Early Years

During the Early Years, we plan adult-led sessions to teach children the skills that are needed in order for them to access the Child Initiated opportunities. We relate the children's creative development to the objectives set out in the Early Years Foundation Stage Development Matters Statements and then at the end of Reception, children are assessed against the Early Years Profile.

These early experiences include asking questions about how things work, investigating and using a variety of construction kits, materials, including recycled and natural materials, tools and products, developing making skills and handling appropriate tools and construction materials safely and with increasing control.

To ensure a smooth transition into KS1, children in Reception are offered a selection of lessons and units from the KAPOW Reception curriculum depending on the needs and interests of the current cohort. Lessons are aimed at supporting children to independently access D&T opportunities offered in the provision and are linked to current topics and all areas of learning.

At The Holy Family School, we provide an enabling environment offering a range of experiences that encourage exploration, observation, problem solving, critical thinking and discussion.

KS1 Objectives

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

KS2 Objectives

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 and exploded 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 [for example, gears, pulleys, cams, levers and linkages]
- Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
- Apply their understanding of computing to program, monitor and control their products

Teachers at The Holy Family School check the dietary needs of the children in their class to identify any foods that should not be available to specific children, or groups of children. The children are made aware of the safe use and correct procedure involved when using tools and equipment in a learning environment and how to follow proper procedures for food safety and hygiene. The children are made aware of the need to be careful and to understand that their actions can affect others. The children build up a range of skills when using equipment to reduce unnecessary risk.

Impact

At The Holy Family School, assessment is an integral part of the teaching process. Assessment is used to inform planning and to facilitate differentiation. The assessment of children's work is on-going to

ensure that understanding is being achieved and that progress is being made. Our assessing methods include the following as appropriate: -

1. Looking at a child's recorded work i.e. model, photographs, written work.
2. Individual discussion.
3. Listening to the children's ideas as they discuss between themselves.
4. Group discussions in both planning and reporting back sessions.
5. Observing the children's skills in Design and Technology.
6. 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 Key Learning Skills.

Children are monitored on a regular basis to check progress. We encourage all pupils to take responsibility for their own and their peers learning. A range of Assessment for Learning strategies are used, for example peer marking – the children regularly peer mark and are taught to comment on each other's work using vocabulary related to the skill taught, evaluation, self-assessments, traffic lighting achievement against objectives and success criteria, the use of talk partners and end of unit teacher/pupil evaluation using 'I can' statements. Through these, both children and adults are able to recognise the progress being made.

Leadership and Management

Role of the co-ordinator is to:

- advise and support staff in planning teaching and learning of design and technology.
- establish portfolio files of children's design and technology work in each year group to evidence progression.
- produce the design and technology Policy.
- produce and implement the design and technology action plan with realistic and developmental targets.
- ensure progression of skills and a variety of design and technology experiences are planned for in the whole school long term plan.

Monitoring and Evaluation

At The Holy Family School, monitoring takes place regularly through sampling children's work, pupil surveys, teacher planning and learning walks. We recognise that the type of recording needs to be matched to the type of design and technology activity as well as to the needs and abilities of the child. Therefore, a variety of recording methods are used, including pictures, structured worksheets, sketches, diagrams, flow charts, model making, written explanations, photographs, school displays and the occasional video recording. Evidence is saved into class folders each term.