St Francis of Assisi Catholic Primary School

Design & Technology Policy

2023 - 2024

At St. Francis of Assisi School:

We love and grow in Christ

We live and learn in partnership

We build and share together

Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils at St Francis of Assisi, design and make products within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and we enable them to master their knowledge through other curriculum areas such as art, mathematics, science and computing. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through exploration and awareness of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world.

Aims and Objectives

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

Planning

Early Years Foundation Stage

During EYFS, children begin their creative journey through a play-based curriculum incorporating all seven areas of learning, with emphasis on 'Expressive art and design' and 'Physical development'. Children's skills for investigating, designing and making are promoted through independent learning time as well as objective-led activities. Children's knowledge and understanding of the world is encouraged by asking questions about design and how things work. Children have daily access to creative resources which allow them to undertake self-initiated practical tasks independently.

Key Stage 1

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]. 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

Key stage 2

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment]. 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 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

Cooking and Nutrition

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life. Pupils should be taught to:

Key stage 1

- Use the basic principles of a healthy and varied diet to prepare dishes
- Understand where food comes from

Key stage 2

- 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

Assessment and Recording

Assessments will be made using a combination of the following:

- Children's work
- Process of work
- Pupil voice
- National Curriculum descriptors

A photographic portfolio of work will be kept by the subject co-ordinator for assessment purposes and for monitoring progression. Displays of design and technology work will be set up by school staff throughout the school year to showcase work and demonstrate the making process. Photographs of displays will be recorded in the portfolio of work. End of year reports to parents will detail progress and achievement in design technology.

Resources

Resources and materials are stored in the labelled cupboards in the Rainbow room. Class teachers should ensure that equipment is returned and inform the co-ordinator if any

equipment is damaged or any more needs sourcing. If you require any specific resources please ask the co-ordinator in advance to allow time for ordering and delivery.

Equal opportunities and Special Educational Needs

At St Francis of Assisi all children have the right to equal opportunities. We respect the individuality of everyone and aim to provide equality for everyone. Class teachers will make adequate provision for those children with SEN to access materials and tools (when safe and appropriate) to enable those to have the same opportunities for designing and making. If advice or assistance is needed, the class teacher should consult the co-ordinator or Headteacher.

Design and Technology co-ordinator

The role of the subject leader is to lead the development of design and technology throughout the whole school. They will ensure that the policy and any documentation are up to date and that staff are aware of national developments. Resources and equipment will be ordered and organised by the co-ordinator. The co-ordinator will review, assess and record the progression of DT across the school and monitor the teaching and learning.