

**Much Woolton Catholic Primary School**

*‘****With Jesus we Love, Learn and Grow****’*

**School Policy for Design and Technology**

Approved by the Governing body in October 2021

Signed \_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_Chair of Governors

Signed\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_\_ Head teacher

**MISSION STATEMENT**

With Jesus we Love, Learn and Grow

**To do this we will:**

* Be a Christian community that follows Jesus in living out Gospel values.
* Provide opportunities for all to grow and achieve their full potential, by igniting a desire for lifelong learning.
* Be a beacon of light that shines out to others, sharing faith, hope and love.

**Objectives:**

* Provide quality collective worship and enriching liturgical celebrations.
* Enable our children to acquire an excellent religious education, through a well taught and resourced Come and See programme.
* Encourage all to develop their understanding of and relationship with God, while at the same time respecting that others choose to express their faith in different ways.
* Be positive role models, who treat each other with respect and are willing to forgive and be forgiven.
* Provide a stimulating curriculum, which is fun, challenging and relevant to the needs of our children.
* Value all our pupils and staff, appreciating their uniqueness and individual talents, enabling them to develop these to the full.
* Have high expectations of ourselves and each other, in all that we do.
* Ensure that all children reach their full potential through effective planning, assessment and evaluation, which will inform their next steps.
* Create a positive atmosphere where all feel valued and are welcomed into our school community.
* Develop positive links between the school and parish community.
* Learn about and appreciate other faiths and cultures.
* Use our talents as responsible citizens to enrich the lives of others in our local and the global community.

**Aims and Objectives**

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, becoming 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.

The School’s aims for Design and Technology are to:

* 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.

**Inclusion and Equal Opportunities**

All children at Much Woolton Catholic Primary School are entitled to participate in the DT curriculum regardless of ethnicity, gender, religion and special educational need. At Much Woolton Catholic Primary School, we feel that it is essential that all children’s efforts are valued and supported in a safe and secure environment.

**Teaching and Learning**

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].

**Early Years Foundation Stage**

In the ‘Early Years Foundation Stage’ the areas of both Art and Design and Design and Technology are addressed under the Specific Area of the curriculum of ‘Expressive Arts and Design’ (EAD). ‘Expressive Arts and Design’ is made up of the two aspects of ‘Exploring and Using Media and Materials’ and ‘Being Imaginative.’ Teaching and learning is facilitated in accordance with the age-related expectations for each aspect with the aim of children achieving the Early Learning Goal for each aspect by the end of Reception. The elements of each Early Learning Goal that specifically relate to Art and Design and Design and Technology are underlined below:

* **EXPLORING AND USING MEDIA AND MATERIALS** Children sing songs, make music and dance, and experiment with ways of changing them. They safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.
* **BEING IMAGINATIVE** Children learn what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology, art, music dance, role play and stories. Children will learn through a combination of adult-led direct teaching sessions designed to develop skills, knowledge and understanding, and as a result of child-initiated independent learning and exploration throughout the learning environment where learning is further extended through the intervention of skilled practitioners within the Foundation Stage Unit.

**Key Stage 1**

**By the end of Key Stage 1 pupils should be able 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.
* Understand where food comes from, the food groups and what makes a healthy balanced diet.

**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**

**By the end of Key Stage 1 pupils should be able 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
* Understand where food comes from, the food groups and what makes a healthy balanced diet.

**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
* What ingredients could be changed in order to improve a recipe.

**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

**Assessment**

Assessment will be built into the planning of the subject, either regularly in small steps, or to complete a unit of work. All class teachers are responsible for short term planning based on medium term plans.

They will:

• Identify the appropriate teaching and learning strategies required.

• Provide a balance and variety within the classroom – of content and organisational

 opportunities for pupils.

• Assess and plan for the specific needs of children within their own class whilst

 adhering to the progression laid down in the scheme.

**Resources**

Funding for Design and Technology will be within the school budget plan for each financial year. There is a central Design and Technology budget to cover the purchase of equipment such as tools, construction kits, consumable materials, books and other resource materials.  The Subject Leader will be responsible for ordering equipment and materials. It is the responsibility of each class teacher to identify additional resources needed in relation to their project. Equipment and materials have been organised in the specific cupboard.  Any shortages, breakages or losses should be reported immediately to the Design and Technology subject leader.

**Monitoring and Review**

The Subject Leader is responsible for monitoring the standard of the children’s work and the quality of teaching. This may be through lesson observations, work scrutiny or looking at other data for the subject. The Subject Leader is also responsible for supporting colleagues in the teaching of Design Technology, for being informed about current developments in the subject, and for providing a strategic lead and direction for the subject in the School. We allocate special time for the vital task of reviewing samples of children’s work and for visiting classes to observe teaching in the subject.

**Hygiene and Safety**

It is important that children are taught essential life skills to enable them to participate confidently and safely in designing and making in society.  Teachers have a duty to introduce children to a wide variety of production processes and the correct tools for the task. Children must design considering health and safety issues and consequences and operate in a safe and hygienic manner when designing. The subject leader, if required, supports teachers to teach the skills necessary ensuring that children can design and make safely.