MERTON BANK PRIMARY SCHOOL *Never less than our best*

DT Policy

INTENT:

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.

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.

Early Years

Expressive Arts and Design is one of the 4 key areas of the EYFS framework. It involves supporting children to explore and play with a wide range of media and materials, as well as providing opportunities and encouragement for sharing their thoughts, ideas, and feelings through a variety of activities in art, music, movement, dance, role-play, and design and technology.

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 interactive 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

IMPLEMENTATION:

All children will be taught the skills and principles of Design Technology as outlined in the programmes of study in the National Curriculum for Design Technology. Attainment targets to improve upon are indicated in the co-coordinators file under assessments. In Reception the children follow guidelines for creative development as set out in the Early Learning Goals. At key stage one and two Design Technology is often rotated or sometimes combined with art and design depending on the relevant links with the class' current learning journey. Additional to this, creativity should be encouraged in all subjects. Teachers ensure that investigating and making includes exploring and developing ideas and evaluating and developing work. Knowledge and understanding informs this process.

Every opportunity is taken for the four key aspects of Design Technology to be integrated into learning;

- **Design**
- **Make**
- **Evaluate**
- **Technical Knowledge**

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programmes of study, taken from the National Curriculum.

What do Design Technology lessons look like at Merton Bank?

Design Technology lessons will follow a similar structure across school:

1. Researching and looking at focus designers / focus inspiration linked to the project outcome.
2. Technical practice of design and construction skills.
3. Practice ideas in Design Technology books, UKS2 children can then explore making prototypes.
4. Final piece building.
5. Self / peer evaluation of the final piece.

IMPACT:

In Merton Bank we want our children to be curious about how things are made, the mechanics of moving objects and how products are designed and improved by designers. We aim for our children to use this curiosity to develop research, construction and technology skills, learning to question how things are made and the process behind a product.

Assessment

Design Technology feedback is given verbally by teachers, teaching assistants and sometimes by peers. Assessment judgements are based on how well a child has met the progression ladder statements. Assessments will be made by class teachers after each project and these will be used to support an end of year assessment judgement for effort and attainment. The subject leader will monitor Design Technology books every term.

Written by: Emily McKenna (Subject Leader)
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Nurturing a Love For Learning