



Brookfield Primary School

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BROOKFIELD PRIMARY SCHOOL
Design and Technology Policy

Intent:

The national curriculum for design and technology aims to ensure that all pupil

- 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. At Brookfield primary school we aim to provide all children with a broad and balanced curriculum which prepares them for life beyond primary education. We encourage children to use their creativity and imagination, to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. We actively encourage our children to be critical thinkers, forward planners and effective problem solvers. 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 people. 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.

Early Years

Expressive Arts and Design is one of the 4 specific 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, playgrounds, the local community and 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, enterprise 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. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably 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.

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. 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 Brookfield?

Units are based around **food technology**, **structures**, **textiles** and **mechanisms**.

DT units will follow a similar structure across school:

1. Researching and looking at focus designers / focus inspiration
2. Technical practice of **design** and construction skills linked to work taken from the focus designer/ inspiration focus
3. Practice ideas in D and T booklets
4. **Make** the product
5. Self / peer **evaluation** of the final piece

Year Group	Aut	Spr	Sum
EYFS	Skills – attaching, cutting, texture and creating with a purpose	Using different media and materials. Joining and connecting	Cooking and Nutrition
Y1	Structures: Playground	Moving Pictures: Levers and Sliders	Cooking and Nutrition
Y2	Cooking and Nutrition	Textiles: Puppets	Mechanisms: Wheels and Axels
Y3	Mechanical systems: Pop-up Book	Textiles: Roman Purse	Cooking and Nutrition
Y4	Shell Structures	Pneumatics	Cooking and Nutrition
Y5	Pulleys and Gears	Cooking and Nutrition	Using mechanical and electrical circuits with a model
Y6	Cooking and Nutrition	Textiles	Cam Mechanisms

IMPACT:

Assessment and record keeping

Design Technology feedback is given verbally by teachers, teaching assistants and sometimes by peers. Some pieces of Design Technology evidence will have written feedback in the form of next steps to challenge and progress learning where appropriate. Assessment judgements are based on whether a child has met the objective or not. 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 Co-ordinator will keep a photographic portfolio of designs, drawings, pictures and finished products. These can be used for assessment purposes and for monitoring progression through year groups.
- D and T booklets will be used by the subject leader to document whole school progress in DT. This will follow a similar format across school, covering design, make and evaluate structure.
- A display of design and technology work will be set up in the general display area of school, periodically. This will include drawings, patterns, quick models and final products to demonstrate to parents the whole and making process.