Design & Technology Policy

Believe, Achieve, Celebrate

Reviewed November 2024 - S Patel

INTENT

Aims and objectives

1.1 At Thurnby Mead, the aims of Design and Technology are:

- To develop the creative, technical and practical experience of pupils.
- To build and apply knowledge understanding and skills in order to design and make a range of products.
- To critique, evaluate and test their ideas and products and the work of others.
- To understand and apply the principles of nutrition and healthy eating.

1.2 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.

2 Attainment targets.

Across Key Stage 1 and 2 pupils are taught to develop their D&T skills through creating projects from the following five key areas:

1) Textiles
2) Structures
3) Mechanisms / Mechanical Systems
4) Electrical Systems
5) Food and Nutrition

2.1 Within Key Stage 1 pupils should be taught to:

Design:

- design purposeful, functional and 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
- 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.

2.2 Within Key Stage 2 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 from a range of cultures and backgrounds 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.

3 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.

3.1 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

3 Design and Technology in the Curriculum

At Thurnby Mead we follow the 'Kapow' scheme of learning which ensures progression of skills and follows a sequence to build on previous learning. Our children will gain experience and skills of a wide range of formal elements of design and concepts of technology in a way that will enhance their learning opportunities, enabling them to use Design and Technology across a range of subjects to be creative and solve problems, ensuring they make progress.

All classes undertake three DT units per year taken from one of the five key areas and carefully chosen to ensure coverage and progression of skills from years 1-6. Children's work and pictures of their work will be stored on SeeSaw for reference and assessment. We want to ensure that Design and Technology is embedded in our whole school curriculum and that opportunities for enhancing learning by using design and technology are always taken

5 Spiritual, moral, social and cultural development

The teaching of Design and Technology offers opportunities to support the social development of our children through the way we expect them to work with each other in lessons. Resilience is a key theme running through our DT curriculum, and the children are encouraged to become innovators and risktakers. Groupings allow children to work together and give them the chance to discuss their ideas and feelings about their own work and the work of others. Their work in general helps them to develop a respect for the abilities of other children and encourages them to collaborate and co-operate across a range of activities and experiences. The children learn to respect and work with each other and with adults, thus developing a better understanding. They also develop an understanding of different times and cultures through their work on design and technology.

IMPACT

6 Monitoring and Assessment

Progress in Design and Technology is demonstrated through regularly reviewing and scrutinising children's work, in accordance with our Design and Technology assessment policy to ensure that progression of skills is taking place. Namely through:

1) Looking at pupils' work, especially over time as they gain skills and knowledge
2) Observing how they perform in lessons
3) Talking to them about what they know
4) Recording evidence of work, assessments, evaluations and reasoning using Seesaw
5) Using 'skills' on Seesaw to document attainment in specific skills.

The Design and Technology curriculum will contribute to children's personal development in creativity, independence, judgement and self-reflection. This will be seen in them being able to talk confidently about their work, and sharing their work with others. Progress will be shown through outcomes and through the important record of the process leading to them.