



# Moor First School

## Design and Technology Curriculum

'Together we unlock potential and learn for life'

### Intent

Design and Technology is an inspiring, rigorous and practical subject. Design and Technology encourages children to learn to think and intervene creatively to solve problems both as individuals and as members of a team. At Moor First, we aim to provide plenty of opportunities for the children to learn, apply and strengthen essential skills required in the designing, making and evaluating of an effective product for a given purpose. It is also the intent of the DT Curriculum to ensure that the children are well-equipped with useful technical knowledge to support them in the design and making of their product. For example: learning how to strengthen a structure to make it more stable, learning how to use mechanisms or electrical systems in their designs and learning how to use computer programming to control a product. In addition, our school aims to develop the children's use and understanding of technical vocabulary associated with this subject. This is so that the children can articulate the skills that they have applied, the equipment that they have used and describe the material/s and features of the product that they have made. 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 and enterprising that will positively influence their future. 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 future generation.

### Implementation

Our Design and Technology curriculum shows a clear progression of skills across the key stages, which links to the Early Years Foundation Stage Profile, National Curriculum across all year groups and into Middle School. This ensures that skills are sequenced appropriately to maximise learning for all children. Through a variety of creative and practical activities, we teach the knowledge, understanding and skills needed to engage in an iterative process of designing and making. By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the attainment targets.

### Early Years Foundation Stage

During the Early Years Foundation Stage, the essential building blocks of children's design and technology capability are established. There are many opportunities for carrying out D&T related activities across all areas of learning. By the end of the Reception year, most children should be able to:

- Explore, use and refine a variety of artistic effects to express their ideas and feelings.
- Return to and build on their previous learning, refining ideas and developing their ability to represent them.
- Create collaboratively, sharing ideas, resources and skills.

### Key Stage 1

#### 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 wide 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 in their products

#### Cooking and nutrition

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

### Key Stage 2

#### 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
- select 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

### Technical knowledge

- apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- understand and use mechanical systems in their products
- understand and use electrical systems in their products
- apply their understanding of computing to program, monitor and control their products

### Cooking and nutrition

- 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

Because the children will have access to key knowledge, language and meanings, they will be able to apply this to their work in Art and across the wider curriculum. We provide opportunities for all children to engage in extra-curricular activities during and after school. At Moor First, annual questionnaires are given to each year group to indicate any interventions. Senior leadership teams and school governors have oversight of our school aims, policies, actions plans and financing for this subject.

### Impact

Our curriculum aims to improve the wellbeing of all children. We ensure the children

- 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 and 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. Children will

design and make a range of products. A good quality finish will be expected in all design and activities made appropriate to the age and ability of the child.

Children 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.