



Design & Technology Policy

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Date: June 2021

Review date: July 2023

**MAYESPARK PRIMARY SCHOOL**

**Design and Technology Policy**

**Introduction**

This document is a statement of the aims, principles and strategies for the teaching and learning of design and technology at Mayespark Primary School.

**Aims**

Our aim is to ensure that all children are taught the subject of design and technology as specified in the National Curriculum:

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 products, 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 National Curriculum 2014)

Design and technology prepares pupils to participate in an ever-changing technological world by becoming critical, informed users and innovators of products. They learn to think creatively and become problem solvers as they respond to the user’s needs, wants and interests. They combine their understanding of relevant past products and designers with practical skills to design, make and evaluate their own products.

At Mayespark Primary School, design and technology offers children the opportunity to:

* Develop their ability to create high quality products by combining their designing and making skills with specific knowledge and understanding.
* Nurture creativity and innovation.
* Explore values and attitudes towards the man-made world and how we live and work within it.
* Develop an understanding of products and processes and their contribution to our society.
* Research and explore past and present design and technology products and use this knowledge in their own designs.
* Learn about influential designers of past and present, and explore case studies which show how key designers and key moments in design have impacted upon the world we live in.
* To develop an attitude that is conscious of what a healthy lifestyle is and how seasonal food contributes towards this.

**Teaching and Learning in Design and Technology**

At Mayespark, we use a variety of teaching and learning styles in our design and technology lessons. The principal aim is to develop children’s knowledge, skills and understanding in design and technology. Teachers ensure that children apply their knowledge and understanding when developing initial ideas, planning, making products and then evaluating them. We do this through a mixture of whole-class teaching and individual or group activities. Within lessons, we give children the opportunity both to work on their own and to collaborate with others, listening to other children’s ideas and treating these with respect. Children critically evaluate existing products, their own work and that of others. They have the opportunity to use a wide range of materials and resources, including ICT.

EYFS

Design and technology falls within the ‘Expressive Arts and Design’ strand of the EYFS curriculum. The development of creative skills, knowledge and understanding that help children make sense of their world, this is therefore an integral part of the children’s learning experiences. This learning forms the foundations for later work in design and technology. These early experiences include: asking questions about how things work, investigating and being creative with a variety of materials and tools, developing making skills, and handling appropriate tools and construction material safely with control. We provide a range of experiences that encourage creativity, exploration, observation, problem solving, critical thinking and discussion. These activities, indoors and outdoors, attract the children’s interest and curiosity. Children are given the opportunity to find out about the world they live in, and the role design and technology plays within it through several ways:

* Construct with a purpose in mind, using a variety of resources.
* Use simple tools and techniques competently and appropriately.
* Select appropriate resources and adapt work where necessary.
* Manipulate materials to achieve a planned effect.
* Select tools and techniques needed to shape, assemble, and join materials.

This wide range of design and technology experiences the children encounter in the Foundation Stage provides a good basis for future learning in design and technology in Key Stages 1 and 2.

Key Stages 1 and 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 and school, gardens and playgrounds, the local community, and the wider environment) to design, make and evaluate as well as increase their technical knowledge.

Key Stage 1

Design and technology in Key Stage 1 will teach key concepts such as:

* Design: to design functional and attractive products to appeal not only to themselves, but also to other identified users.
* Make: to select and use a range of tools and materials.
* Evaluate: to evaluate their own designs against the design criteria and to evaluate existing products.
* Technical knowledge: to build structures, exploring how they can be made stronger, stiffer, and more stable and explore and use mechanisms [for example, levers, sliders, wheels, and axles], in their products.
* Cooking and nutrition: to understand where food comes from and the basic principles of a healthy and varied diet. To design and prepare dishes based on this knowledge.

Key Stage 2

In Key Stage 2 design and technology lessons will build on, and develop the key skills and concepts learned in Key Stage 1. Children will be taught the skills and knowledge needed to successfully design, make and evaluate their work.

* Design: to carry out research of existing products. To develop design criteria in order to produce a product which is fit for purpose and aimed at a specific group of people.
* Make: to select and use a range of tools and materials, considering their product’s functional and aesthetic qualities.
* Evaluate: to evaluate existing products, their own work, and the work of others in order to improve their design. To have an understanding of how designers and their products have helped to shape the world.
* Technical knowledge: to 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 and apply their understanding of computing to program, monitor and control their products.
* Cooking and nutrition: to have an understanding of the seasonal nature of foods, and where and how it is produced. To understand what it means to have a healthy diet. To cook and prepare a range of predominantly savoury foods using a range of techniques.

**Planning**

Design and technology is a foundation subject in the National Curriculum. Our school uses both the National Curriculum and the Design and Technology Association’s Projects on a Page plans as the basis for its curriculum planning in design and technology. Our medium-term plans, which we have been developed from the National Curriculum and Projects on a Page themes, give details of each unit of work for each term. They identify learning objectives and outcomes for each unit and ensure an appropriate balance and distribution of work throughout the school. In addition, they highlight key concepts and vocabulary that the children will learn in each unit and offer suggested activities that the class teacher can select and adapt. Our design and technology planning builds upon key concepts and learning taught to the children in previous years. At Mayespark, we recognise the importance of healthy eating and have ensured that each year group will complete a cooking project.

Links with other areas of the curriculum

English: Children are expected to use basic skills and show good levels of written communication when recording their ideas during research, designing, and evaluating.

Maths: Children will be given the opportunity to develop skills gained from their learning in measurement and geometry when designing and making their products.

Science: Staff will make explicit the link between science and design and technology. Prior learning and exploration in areas such as ‘Everyday Materials’, ‘Forces and Motion’, ‘Plants’ and ‘Electricity’ will help to inform children’s design decisions.

Computing and E-Safety: We use computing to support design and technology teaching when appropriate. Children use software to enhance their CAD skills in designing and making and use technology to collect information. The design and technology policy and schemes of work adhere to the whole school’s E-safeguarding Policy, which can be found on the school website.

Relationship, social and health education (RSHE) and citizenship: We encourage the children to develop a sense of responsibility in following safe procedures when making things. They also learn about nutrition and healthy diets, and how by learning to prepare our own meals, we can take control of our health. This fits strongly with the ethos of Mayespark’s unique curriculum. Children will work collaboratively and thus practise communication and team-working skills. Providing examples of careers within design and technology encourages older children to begin to think about future learning and career aspirations. By sharing designers, both male and female from around the world, we will inspire children to see how they too can be a designer.

**Monitoring and Assessment**

Each unit of work is planned and delivered with clearly defined learning outcomes which are shared with the pupils. Teachers assess the children’s knowledge, understanding and skills that they have gained across design and technology units. This will be formally recorded in line with the school’s assessment policy. Children are encouraged to make judgements on their own progress and achievements as well as ways in which their work can be improved. Teachers will report to parents about the progress and effort children display in design and technology in both the mid-year and end-of-year reports.

**Inclusion and Equal Opportunities**

Mayespark Primary School recognises the importance of inclusion, and the design and technology curriculum ensures equal access to all pupils regardless of their ability, aptitude, race, religion, or gender. A wide range of gender specific and cultural images and contexts are shared with the children, and we will use these opportunities to challenge stereotypes. We are committed to providing a teaching and learning environment that allows all children to thrive and reach their potential. All teachers provide suitable learning opportunities for children, recognising that many children have individual needs and ensuring these needs are catered for in design and technology lessons. This includes providing adult support and appropriate equipment and materials to enable all children to access the design and technology curriculum. Teachers are aware of children who have a particular talent for design and technology and aim to provide additional challenges for these children where appropriate.

**Resources**

Mayespark Primary School has a wide range of resources to support the teaching of design and technology across the school. Classrooms have a range of basic resources, with the more specialised equipment kept in the design and technology cupboard. Children learn food and nutrition lessons in a fully resourced kitchen.

**Health and Safety**

At Mayespark we take the health and safety of our children seriously and a general risk assessment is adhered to throughout the school day. Staff will ensure pupils have a tidy environment and enough space to work safely within and set high expectations of responsible behaviour in design and technology lessons. In addition, there is a subject-specific risk assessment for cooking lessons which is carried out by the Health and Safety Co-ordinator and the Subject Lead. It is the responsibility of the subject leader to pass on any relevant health and safety information to staff. It is the responsibility of the individual member of staff to ensure that they have read, understood and acted on this information. Teachers must familiarise themselves with any food allergies or dietary requirements within their cohort and plan accordingly.

We teach children how to follow procedures within their design and technology lessons:

* Children will be instructed on how to use sharp knives safely and will be supervised when using one.
* Children will be instructed on how to use a hob/oven and will be supervised when using one.
* Children will be shown how to use a variety of tools safely and staff will oversee the use of tools, with levels of supervision appropriate to age of children.

**Role of the Subject Leader:**

* To lead the development of design and technology in the school
* To provide guidance on the teaching and learning of design and technology in school
* To monitor the development of the design and technology curriculum and give guidance on assessment, recording and reporting
* To order, organise and maintain design and technology resources
* To keep up to date with local and national developments in design and technology.