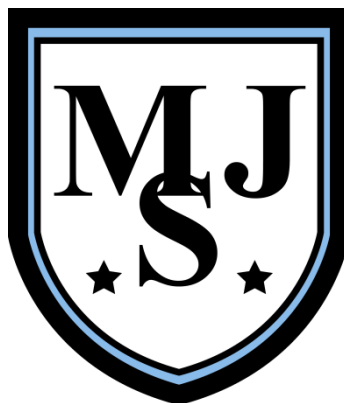


# Meadowhead Junior School

## DESIGN AND TECHNOLOGY POLICY



**Updated:** July 2023

**Next Review Date:** July 2024

**Approved By:** \_\_\_\_\_

**Full Governor Ratification Meeting Date** \_\_\_\_\_

**Chair of Governors to Approve:** \_\_\_\_\_

**Subject Leader:** Mrs. Daisy Worden  
**Governor Subject Leader:**

# Meadowhead Junior School

## Our Mission Statement High Aspirations, Bright Futures

### Intent

#### 1. Statement of Intent

At Meadowhead Junior school our Design and Technology curriculum develops children's skills and knowledge in design, structures, mechanisms, electrical control and a range of materials, including food. It encourages children's creativity and encourages them to think about important issues.

D&T gives children the opportunity to develop skills, knowledge and understanding of designing and making functional products. We feel it is vital to nurture creativity and innovation through design, and by exploring the designed and made world in which we all live and work.

Learning new skills, problem solving, being creative and enjoyment are at the heart of a child's development. As outlined 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

#### 2. Legal Framework

This policy has due regard to all relevant legislation and statutory guidance including, but not limited to, the following:

- DfE (2018) 'Keeping children safe in education'
- National Curriculum DfE (2013) 'Design and technology programmes of study: key stages 1 and 2'

The school aims to assist pupils in achieving attainment targets set out in the national curriculum. By the end of each key stage, pupils are expected to know, apply and understand the matters, skills, and processes specified in the national curriculum. Pupils will learn a broad range of subject knowledge and draw on disciplines such as maths, science, engineering, computing and art. For further information on the National Curriculum please see Section 5

### Implementation

#### 3. Roles and responsibilities

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Overall responsibility for monitoring the teaching of D&T throughout the school lies with the headteacher.

The headteacher will make decisions on:

- How D&T should support, enrich and extend the curriculum.
- The provision and allocation of resources.
- The ways in which D&T can benefit the aims and objectives of the school.
- The headteacher will also be responsible for overseeing the review of this policy with the subject leader.

The design and technology co-ordinator is responsible for monitoring the standards of children's work and the quality and breadth of teaching. The D&T subject leader will also be responsible for:

- Implementing this policy across the school.
- Maintaining resources and advising staff on the use of materials.
- Assisting the headteacher in deciding on the allocation of resources.
- Supporting teaching staff, advising and offering to share their expertise and experience.
- Leading staff training on new initiatives.
- Helping staff to plan future lessons and assessments and advising teachers on teaching methods they may wish to explore.
- Encouraging staff and pupils to be creative.
- Assisting the headteacher in reviewing this policy.

The co-ordinator is also responsible for evaluating strengths and weaknesses in the subject and identifying areas for improvement and development. Subject Leader release time will enable the coordinator to fulfil the role, reviewing medium term plans, monitoring children's work and observing teaching in the subject

## **Classroom teachers will be expected to:**

- Plan and deliver interesting and engaging lessons that adhere to the national curriculum.
- Provide equality of opportunity through their teaching approaches and methods.
- Keep up-to-date assessment records.
- Ensure pupils' development of skills and knowledge progresses through their learning and understanding of D&T
- Set pupils suitable targets based on prior attainment.
- Maintain an enthusiastic approach to D&T.

Monitoring of children's progress begins with the analysis of data from the school tracking system and this feeds into pupil progress meetings.

- Examination of evidence and planning helps further evaluation alongside analysis of assessment results, this will involve the head teacher, deputy headteacher and the subject lead.

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- Feedback from monitoring is given to staff about how they can strengthen their practise and CPD opportunities built in where it would be deemed valuable.

## Impact

### **4. Teaching and Learning**

Please see the Teaching and Learning policy for approaches to teaching and learning at Meadowhead Juniors.

The teaching and learning of design and technology should be a step by step process, where children are taught how to design and make things for a particular purpose. When designing, pupils need to think about what the products they are designing are used for and the needs of those who use them. Each activity should be challenging because they have to develop their own ideas or put a creative stamp on the things they design. Teaching should enable pupils to learn practical skills and technical knowledge, with sufficient depth and breadth to allow practise and experimentation. When making, the children should individually or collaboratively apply those skills to their chosen design. Pupils should be able to test, refine and develop the products they design and make, to check their ideas work and improve them if they don't. When evaluating, the children should be able to explore existing products, modify working models and evaluate their final product.

As part of their work on cooking and nutrition, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. It should be used to instil a love of cooking and show an expression of creativity. Cooking and nutrition should be practical lessons incorporating technical knowledge and pupils' choice.

The school uses a variety of teaching and learning styles in D&T lessons, the main aim of these lessons is to develop pupils' knowledge, skills and understanding. Teachers will ensure pupils apply their knowledge and understanding when developing ideas, planning and making products, and then evaluating them.

The school aims to do this through a mixture of whole-class teaching, group work, and individual activities. Pupils are given the opportunity to work on their own and collaborate with others, listening to their classmates' ideas and treating these with respect.

### **Principles for effective teaching include:**

- Setting tasks in the context of pupils' prior knowledge.
- Promoting active learning.
- Inspiring, exciting and motivating pupils to know more.

### **Strategies for effective teaching include:**

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- Ensuring the teaching methods used suit the purpose and needs of pupils.
- Providing a meaningful context and clear purpose when assigning tasks.
- Investigating, disassembly and evaluative activities.
- Using focussed practical tasks to help pupils make and evaluate products.
- Ensuring tasks are built on skills and understanding.

## **5. The Curriculum**

By the end of KS2, pupils will be able 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 accurately, e.g. cutting, shaping, joining and finishing.
- 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 D&T 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, e.g. gears, pulleys, cams, levers, and linkages.
- Understand and use electrical systems in their products, e.g. 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 will 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 and well, now and in later life.

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By the end of KS2, pupils will be able to:

- 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.

For details of curriculum coverage to fulfil National Curriculum expectations please see long term overview document.

## **6. Planning**

Using the National Curriculum Programme of study, Design and Technology Scheme of work for Key Stage 1 and 2 and the curriculum guidance for the Foundation Stage as the basis of their long term planning document teachers refer to their year group planning which relates to the national curriculum level descriptors. Teachers are also supported by the D&T coordinator with a curriculum overview as to what is expected in each year group.

Classroom teachers will be expected to plan and deliver interesting and engaging lessons that adhere to the national curriculum. Each lesson should provide equality of opportunity through their teaching approaches and methods. Alongside planning, class teachers must keep up-to-date assessment records. The planning and organising of teaching strategies for each subject will be consistently reviewed to ensure that no pupil is at a disadvantage.

## **7. Assessment and Recording**

The learning outcomes in each unit show how children might demonstrate what they have learnt. Pupils should be involved in actively evaluating their work and thinking about possible improvements. Pupils' D&T work may be assessed throughout the design process and by teachers judging recorded work.

Teachers will also assess pupils':

- Knowledge of tools, materials and equipment.
- Ability to record and communicate their design ideas in a clear manner.
- Personal qualities and attitudes towards their work.
- Ability to explain what they have created and how.
- Ability to use tools and materials safely and effectively.
- Ability to evaluate their work and the work of others.

The majority of assessments will be conducted through observations and discussion. A selection of work may be retained as evidence or photographed for this purpose.

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## **8. Equal opportunities**

All pupils will have equal access to the entire design and technology curriculum. Gender, learning ability, physical ability, ethnicity, linguistic ability and/or cultural circumstances will not impede pupils from accessing all design and technology lessons.

Where it is inappropriate for a pupil to participate in a lesson because of reasons related to any of the factors outlined above, the lessons will be adapted to meet the pupil's needs and alternative arrangements involving extra support will be provided where necessary.

All efforts will be made to ensure that cultural and gender differences will be positively reflected in all lessons and teaching materials used. Meadowhead Junior Primary aims to provide more academically able pupils with the opportunity to extend their thinking through additional challenge questions and activities.

## **9. Resources and Tools**

A resource audit and purchase is carried out annually. Before new stock is ordered, teaching staff complete request lists based on specific needs for their future DT lessons. There are both central resources in the art and D&T cupboard and also some supplies are kept in individual classrooms.

Children are encouraged at all times to respect and care for their working environment, selecting, using, storing and returning their own materials and equipment tidily, safely and with regard to economy of use.

## **10. Health and Safety**

The general teaching requirement for health and safety applies in this subject. Certain health and safety concerns are inherent with design and technology, including the storage of materials and tools and the use of equipment within lessons.

Children must be supervised at all times during activities. Children are instructed in the correct use of equipment and tools with specific dangers, e.g. heated or sharp resources. In-class ovens, heated hobs or electrical pans are all PAT tested and visually inspected before use. Children should be supervised in their use and objects should never be left unattended.

Cool melt glue guns are used by children under supervision.

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Teachers will carry out a risk assessment before each activity, considering their tools, materials and equipment being used. Teachers will follow the safe systems of work document to ensure safe practices when using DT equipment. Before undertaking practical tasks, children should be taught to use tools correctly in order to ensure safety.

**Signed subject leader:**

**Chair of Governors:**

**Headteacher:**

**Date:**