

# MARISH



## Academy Trust

# Design Technology Policy

Version 3

### Summary

This document sets out how Design Technology is taught at Marish Academy Trust and our long term plan for the delivery of the Design Technology Curriculum.

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## 1 Introduction

Design and technology prepares children to take part in the development of tomorrow's rapidly changing world. Creative thinking encourages children to make positive changes to their quality of life. Design Technology encourages children to become autonomous and creative problem-solvers, both as individuals and as part of a team. It enables them to identify needs and opportunities and to respond by developing ideas and eventually making products and systems. Through the study of design and technology they combine practical skills with an understanding of aesthetic, social and environmental issues, as well as functions and industrial practices. This allows them to reflect on and evaluate present and past design and technology, its uses and its impacts. Design and technology helps all children to become discriminating and informed consumers and potential innovators.

## 2 Aims

DT aims to enable pupils to:

- Develop imaginative thinking in children and to enable them to talk about what they like and dislike when designing and making.
- Discuss how things work, and to draw and model their ideas.
- Select appropriate tools and techniques for making a product.
- Prepare for adult life by exploring attitudes towards the world and how we live and work within it.
- Develop an understanding of technological processes, products, their manufacture, and their contribution to our society.
- Appreciate the need to take account of the necessity for safety, both for themselves and those around them.

## 3 Delivery of Curriculum

DT in the National Curriculum has one attainment which sets out "knowledge, skills and understanding in materials and components that pupils of different abilities and maturities are expected to have developed by the end of each key stage."

The Attainment target has 8 level descriptions which describe the types and range of performance in DT that pupils working at that level should characteristically demonstrate.

At Key Stage 1 the great majority of pupils are expected to work in the range of levels 1-3. The majority of pupils at age 7 are expected to attain level 2. At Key stage 2 the majority are expected to work in the range of levels 2- 5, and at age 11 to attain level 4.

In order to meet the requirements of KS1 and programme of Study for DT, Marish Academy Trust has developed the following long term plan:

## Foundation Stage

Teaching in the Foundation stage is cross-curricular over the seven areas of learning. We encourage the development of skills, knowledge and understanding that help nursery and reception children make sense of their world as an integral part of the school's work. This learning forms the foundations for later work in design and technology. These early experiences include asking questions about how things work, investigating and using a variety of construction kits, materials, tools and products, developing making skills and handling appropriate tools and construction materials safely and with increasing control.

Pupils are provided with opportunities that encourage exploration, observation, problem solving, critical thinking and discussion. These activities, indoors and outdoors, attract the children's interest and curiosity.

## Key Stage 1 and 2

Design Technology is taught within our Creative Curriculum, encouraging the reinforcement of skills and knowledge by forging links with other subjects.

At the beginning of each topic pupils are asked to use their own experience to develop and communicate design ideas about a topic. This is then displayed and added to throughout the project. Each year group has a skills ladder which shows progression from Year 1-6. The content of the topic is driven by pupils but skills to learn are controlled by the class teacher in reference to the skills ladder. Additionally Primary key learning skills (cross curriculum skills) also drive the lesson at the planning stage.

**During key stage 1:** Pupils learn about using tools, equipment, and materials to join two components together to make quality products. They will begin to know about the properties of different materials and simple mechanisms. They will start to investigate and evaluate a range of familiar products such as simple toys or those appropriate to the design brief and also carry out focussed practical tasks set by the teacher.

**During key stage 2:** Pupils learn about Investigating and evaluating a range of familiar products thinking about how they work (disassembly), how they are used and the views of people who use them. They will carry out focussed practical tasks as appropriate to the design brief that develop a range of techniques, skills, processes and knowledge. They will also design and make products using a range of materials, appropriate tools and techniques and joining components to make quality products.

As pupils progress through the school they encounter higher level DT skills indicated on the skills ladder. The tasks they are asked to complete match the level descriptors (adapted into the skills ladder) in the National Curriculum document.

## Organisation

All topics across each year group contain aspects of DT. Topics are also broken down into weekly themes.

## **4 Inclusion**

### **Equal Opportunities and EAL**

At Marish Academy Trust we aim to provide equal opportunity for all pupils whatever their age, ability, gender, race or background. We want all our pupils to achieve their full potential during their time with us. As such, teachers work to ensure that our expectations, attitudes and practices enable all pupils to reach their potential.

Where particular pupils have learning and assessment requirements which must be addressed in order to overcome barriers to learning, for example as a result of disability, or linked to the pupils' progress in learning, learning support assistants or class teachers take into account of these requirements by:

- Providing all pupils with EAL with opportunities to achieve in this subject area. When appropriate, activities are differentiated so that all learners can access the curriculum. At specific times, the EAL support team work alongside pupils to support them with their learning.
- Marish Academy Trust is committed to ensuring equal opportunities of all pupils with any form of disability and will ensure that disabled pupils are treated favourably in any procedures and practices. Children bring different experiences and talents to D.T. The qualities they already possess should be valued, whilst opportunities for widening their experiences need to be created. When a pupil's disability has been disclosed, the school will ensure reasonable adjustments are put in place so that they can have full access to the curriculum.

### **Special Educational Needs**

DT should be an enjoyable, stimulating experience for all pupils. Its Visual, Auditory and Kinaesthetic skills approach enable any pupil with Special Educational Needs to fully participate in lessons. The varieties of areas in DT (woodwork, textiles, cooking, graphic design etc) mean that pupils with abilities in different areas will be able to achieve in this subject.

Well- managed group work and / or allowing children to collaborate means that pupils with reading or writing difficulties can be helped by other pupils. Teachers should be prepared to adapt activities or give extra help where needed. Well prepared stimulating activities should increase motivation and reduce problems of a behavioural or emotional nature.

In many cases the action necessary to respond to an individual's requirements for curriculum access will be met through greater differentiation of tasks and materials. Where pupils need access to specialist equipment or adapted activities teachers will refer to and implement the pupils' statement of special educational needs and work closely with representatives of other agencies who may be supporting the pupil.

## 5 Assessment, roles and resources

### Assessment and record keeping

The DT subject leaders, Creative curriculum leaders and senior management are responsible for observing practice and monitoring the quality and impact of DT teaching and learning. Teachers analyse pupil's progress at the end of each school year to complete annual report to parents.

In relation to marking, teachers should also refer to the school's marking policy for detailed guidance. For DT, this includes traffic lights, verbal feedback and small group or class evaluations/discussions (with an emphasis on positive aspects of children's work).

### Resources

Each school has a wide range of resources to support the teaching of DT. These are gathered as the budget allows. Resources for each year group are stored in the subject leader's classroom and the DT/Art cupboard and shared as needed.

### ICT

ICT enhances our teaching and learning in DT, wherever appropriate, in each key stage. Pupils will be provided with opportunities to develop and apply their ICT capability to support their learning in Design Technology. They will use the Internet selectively to find information, digital cameras to take pictures, e-mail to communicate with people in other places and databases/word processors/spreadsheets to handle and present information. Opportunities for embedded ICT as a tool to support learning and teaching are identified in curriculum planning.

### Role of the subject leader

- Monitoring and adapting the skills ladder
- Help and support colleagues to develop their interest in DT and subject expertise
- Lesson observations/ sharing good practise
- Managing the DT budget and auditing resources
- Ensuring common standards and formats for recording and assessment

Children use the computer suite and individual machines in classrooms to enhance their skills in a variety of ways, such as data handling, word-processing, researching information on the Internet, presenting information and using digital cameras. Staff and children are also encouraged to use the IWB in lessons, with high quality resources available, again where appropriate.

## 6 Health and Safety

A safe working environment and ways of working need to be encouraged from the earliest stage and safe practices should be understood by voluntary helpers.

All areas must be in the direct vision of the teacher and there should be enough space for each child and group to work comfortably.

Teachers should be aware of any physical limitations which a pupil may suffer e.g. Poor eyesight or hearing, dominance of left or right hand and make suitable arrangements to allow the pupil to operate effectively.

**THE USE OF SHARP EDGE TOOLS SUCH AS WOOD CHISELS AND LARGE KITCHEN KNIVES SHOULD BE AVOIDED IN PRIMARY SCHOOLS.**

**Craft knives should only be used by older children (Yr.6) under direct supervision. Always use with a safety metal ruler and preferably on a cutting mat. Teach children to keep their fingers behind the cutting edge of sharp tools.**

## **Tools**

Tools which present a safety hazard, such as a glue gun, saws, other tools which possess sharp blades or points, need to be secured away from general tools. The safe use of tools should be modelled, by the teacher, before any practical work is undertaken.

### **(a) Saws**

Never saw directly on the table. Always use a bench hook or G-cramp the material in some way. Show the children how to start a saw cut by drawing the saw towards them to make a notch. When sawing, the effort is needed on the push stroke. Keep your hand and arm in line with the saw cut. Support the material when nearly finished to prevent splintering.

### **(b) Drills**

Children need to be shown how to change twist drills, how to hold a hand drill and how to keep it at right angles to their work. When drilling, turn the handle in a clockwise direction and continue turning the same way when removing the drill bit from the hole.

### **(c) Glue guns**

Children should experience a variety of ways of joining materials other than with a glue gun. However, a glue gun is very useful for joining wood, metal and certain plastics. It is recommended that the cooler type of glue gun should be used only by children from Year 4 upwards, under the close supervision of a teacher.

### **(d) Working with food**

Cooking utensils and work areas should be kept meticulously clean. Children should learn simple personal hygiene rules such as wearing a clean apron, washing hands before handling food and not eating food as they are cooking.

## **7 Revision History**

<b>Version</b>	<b>Date</b>	<b>Author</b>	<b>Comments</b>
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## 8 Approval History

Version	Approved	Comments