



# Design and Technology

## Intent, Implementation and Impact of the DT Curriculum

### Intent

At Long Meadow School, **high quality teaching** and **enjoyment of learning** is crucial for every subject – DT is no different. Being inquisitive is positively encouraged and ‘How does that work?’ or ‘How could I do/make that?’ are questions key to our understanding in DT. Our DT curriculum provides an inspiring, rigorous and practical experience for all children. Their journey is shown on the DT Roadmap. Throughout the programme of study, children acquire **technical knowledge** through **creative** and **practical experiences** and learn to **design, make** and **evaluate** confidently. Techniques and knowledge, from a range of relevant contexts, will be modelled and products studied/experienced/researched to give children the basis from which they can develop their own ideas.

### Implementation

Our curriculum is structured and sequenced to enable the children’s knowledge and skills to progress, and also be revisited throughout their time at the school. The programme of study, skills progression and **never stops** are clearly identified within our **Hands, Head, Heart** curriculum document. This is ensured by:

- giving pupils regular, high quality, practical hands-on experiences across the DT curriculum
- breaking down the skills and techniques required for each project in each phase and year group
- ensuring that pupils carry out projects in construction, textiles and food technology throughout their Long Meadow School experience

We aim to address potential barriers to learning by providing children with a clear progression pathway enabling them to achieve and embed their knowledge and technical skills into their **long-term memory**, so preparing them for their own future. In doing so, they will develop the creativity, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. They will then be able to design and make high quality prototypes and products for a wide range of users.

Teachers create a positive attitude to DT learning within their classrooms and reinforce an expectation that all children are capable of achieving high standards in all of their DT projects. Our whole school approach to teaching and learning of DT involves the following:

- our **Hands, Head, Heart Curriculum** ensures complete coverage of the curriculum, building upon what has been previously taught and ensuring all aspects of DT are experienced – including **construction, textiles** and **cooking and nutrition**
- DT is taught in planned blocks of work/topics and lessons are logically sequenced to ensure progression and challenge
- Knowledge organisers are stuck in books at the start of each project and can be used to introduce the vocabulary, skills and ideas involved. They can also be used to revise/check back as the project continues.
- research opportunities will be given to inform their design of functional and appealing products that are fit for purpose. This might be using computers, texts or experiencing/tasting existing products/ingredients

- opportunities to generate, discuss, develop and model their ideas in sketches, designs and prototypes will be given
- they will be given opportunities to strengthen, stiffen and reinforce more complex structures
- children will be taught to understand and apply the **principles of nutrition** and learn how to cook
- a range of resources, tools, equipment, materials, ingredients and components will be provided to develop the children's selection of those appropriate to each task
- different **mechanical** (e.g. gears, pulleys, cams, levers and linkages) **and electronic systems** (e.g. series circuits incorporating switches, bulbs, buzzers and motors) will be incorporated in projects
- they will use computing to design, program, monitor and control their products in certain tasks
- at all stages, children will critique, evaluate and test their ideas and products – for both their own projects and those of their peers
- influential events, examples and individuals involved in DT will be studied to assess how their contributions helped shape the world
- the Early Years Foundation Stage curriculum supports children's understanding and experience of DT through explorative play. This is encouraged by both the environment and skilled practitioners who foster children's curiosity. Children are motivated to ask questions about why things happen and how things work
- where possible, links are made with other subjects to enrich learning
- lessons are practically led as much as possible - giving children regular, high quality, practical hands-on experiences of existing products as well as the products they then create themselves
- problem solving opportunities allow children to apply their knowledge and find solutions for themselves
- tasks are designed to provide appropriate challenge to all learners, in line with the school's commitment to inclusion – with scaffolds provided for those who need them
- **Magenta Principles** are utilised to encourage children to think, talk and do. There is a focus on interaction and discussion as a key learning tool, allowing children to share ideas and develop their ability to talk and think like inventors. Reasoning helps to establish long-term memory and there is an expectation that children will need to recall knowledge
- children use an increasingly wide range of technical vocabulary to describe ideas, objects and phenomena. Key technical vocabulary is introduced for each project in each topic/year group and included in Knowledge Organisers. Pre-teaching vocabulary is encouraged, especially for SEND and EAL children, so it can be used in the following lessons
- children are encouraged to ask their own questions and curiosity is celebrated within the classroom
- teachers use precise questioning to test technical knowledge and skills
- key knowledge is rigorously checked, revisited and consolidated as necessary
- children are supported and challenged in a variety of ways to ensure that all children, including SEND, EAL, disadvantaged and gifted children can achieve their full potential in DT

## **Impact**

The impact of the work in DT at Long Meadow School is measured in a variety of ways. The school uses the national curriculum statements and its **Hands, Heart, Head** curriculum document to assess the children's learning. Monitoring is also carried out through pupil voice, (when the children are asked about their work), book looks (learning in the children's books), learning walks and lesson observations, looking at the work on display, a scrutiny of social media posts about DT at Long Meadow School and class websites. As it is difficult to retain all products in school, photos of these finished items are taken and put into books. In line with the **Hands, Head, Heart** curriculum monitoring will show that teaching is effective and children:

- can use the key skills of **designing, making** and **evaluating** according to the national curriculum

- can demonstrate **technical knowledge and understanding** of the curriculum content
- are **resilient** when facing new techniques and challenges, whatever the skills or task
- are **happy**, creative and enthusiastic designers/makers