Aintree Davenhill Primary School

Design and Technology Policy

Approved by the Headteacher
July 2025

Review date July 2026

Design and Technology Design and Technology Curriculum Intent

Our school motto is **Excellence and Enjoyment** meaning that we want our pupils to achieve excellence, whilst thoroughly enjoying their learning by engaging with a knowledge rich Design and Technology curriculum.

In Design Technology, our vision is for our pupils to develop:

- an extensive understanding of the subject associated vocabulary
- to use examples of good design to **inspire** them as designers
- **excellent** mathematical skills and to apply their secure knowledge to solve mathematical problems relating to their designs
- as critical thinkers – analysing their designs and developing memory through a knowledge rich curriculum
- the **determination** to keep working at something even when it becomes difficult or to accept suggestions from peers and adults on how to improve their work
- a curiosity for and a growing understanding of how their world has developed through design technology
- **respect** for and empathy with the local environment – developing into an understanding of the impact of our actions/needs on our planet and the importance of recycling
- healthy bodies through an understanding of the benefits of a healthy diet

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 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.

A child's education in design and technology starts as soon as they begin to explore the world and it is important for our school to develop this even further. Their understanding of the progression of design and technology should correspond to their knowledge and physical development throughout their education. It should be taught through explicit design and technology projects, direct teaching of skills and based on activities linked to their topics and learning of other National Curriculum subjects.

Aims

The national curriculum for design and technology aims to ensure that all pupils:

- 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

- 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.

We endeavour to provide a series of learning opportunities for all children to acquire the basic knowledge and understanding, which support design and technology. We also strive to deliver progression and continuity for all children throughout the curriculum as they move up the school. In all design and technology activities, we aim to carefully consider the health and safety of all children.

Design and Technology Curriculum Implementation

In implementing the National Curriculum, we recognise a commitment to the following:

1) Developing children's understanding and confidence to use design technology vocabulary through a structured approach to the teaching and learning.
2) Developing their technical knowledge in things such as building structure strength, mechanical systems, electrical systems, computing knowledge of programming, monitoring and controlling products.
3) Developing an understanding of the whole process from designing a product, to making it and to finally evaluating it.
4) Teaching lessons in units/blocks of 5 lessons per term relating to one focus e.g. structures, mechanisms, textiles, food, electrical control or computing.
5) Each lesson containing a review of previous learning, teacher input, learning activity and plenary.
6) An emphasis on reviewing previous learning from lessons taught from the Early Years enables children to draw on earlier taught strategies and rapid recall of skills.
7) Providing links between design technology and other subjects.
8) Providing out-of-class activities/homework activities that are varied, interesting and fun and that consolidate or build upon the work done in the design technology lessons.

The school uses KAPOW planning but this has been personalised to meet the needs of the children at Aintree Davenhill.

Key Stage 1:

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, industry and the wider environment].

When designing and making, pupils should be taught to:

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 range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]
- 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 [for example, levers, sliders, wheels and axles] in their products

Key Stage 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, school, leisure, culture, enterprise, industry and the wider environment].

When designing and making, pupils should be taught 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 [for example, cutting, shaping, joining and finishing], accurately
- 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 design and technology 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 [for example, gears, pulleys, cams, levers and linkages]
- understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
- apply their understanding of computing to program, monitor and control their products

Health and Safety

It is vital that teachers ensure the health and safety of the pupils at all times. When working on design and technology activities, sensible selection of equipment and materials, organisation of classroom work areas and the clear modelling of techniques provide a good foundation for health and safety practice.

Special Education Needs

In order to provide children of all abilities access to design and technology at a suitable level, teachers will need to ensure differentiated approach. This can be achieved through a mixture of differentiated tasks, outcomes or teacher interventions.

Assessment, Recording and Reporting

Marking is to always be in line with the school marking policy and respect children's achievements, giving positive feedback. Effective feedback gives children guidance on how they might enhance the quality of their work.

At the end of each project, children's work will be assessed against the National Curriculum skills and objectives. Pupils' achievements and progress are reported to parents at a parents' evening and in their end-of-year report.

Impact of the Design and Technology Curriculum

Monitoring and Evaluation

The curriculum is monitored by the Head teacher, the DT Subject Leader along with the Curriculum Team and the Leadership Team through:

- observation of lessons – feedback to teachers
- monitoring the planning of the curriculum
- looking at work in the children's books and finished products
- resources being used
- courses and INSET attended by staff
- evaluation of the action plan for the SIP
- talking to pupils and staff
- looking at oracy opportunities to develop children's ability to communicate effectively and articulate their ideas and thoughts confidently.

The D.T Subject Leader uses information gathered from the above plus knowledge of National and LEA initiatives to develop the action plan for DT for the School Improvement Plan.

Design and Technology Policy – Revised June 2025
Gill Cockbain – DT Subject Leader