

Design Technology at Billingborough

Through our units of work, we aim to build an awareness of the impact of design and technology on our lives and encourage pupils to become resourceful, enterprising citizens who will have the skills to contribute to future design advancements.



Our Design and technology curriculum enables pupils to meet the end of key stage attainment targets in the National curriculum and the aims also align with those in the National curriculum. Within our Early Years, we provide opportunities for pupils to work towards the Development matters statements and the Early Learning Goals.

Design Technology Implementation

The Design and technology National curriculum outline the three main stages of the design process: design, make and evaluate. Each stage of the design process is underpinned by technical knowledge which encompasses the contextual, historical, and technical understanding required for each strand. Cooking and nutrition have a separate section, with a focus on specific principles, skills and techniques in food, including where food comes from, diet and seasonality.

The National curriculum organises the Design Technology attainment targets under five subheadings or strands:

- Design
- Make
- Evaluate
- Technical knowledge
- Cooking and nutrition

We have a clear progression of skills and knowledge within these five strands across each year group.

Our curriculum mapping identifies which of our units cover each of the National curriculum attainment targets as well as each of the five strands.

We have mapped the progression of knowledge, skills and concepts that are taught within each year group and how these skills develop to ensure that attainment targets are securely met by the end of each key stage.

Through our units of work, pupils respond to design briefs and scenarios that require consideration of the needs of others, developing their skills in six key areas:

- Mechanisms
- Structures
- Textiles
- Food

- Electrical systems (KS2) **and**
- Digital world (KS2)

Each of our key areas follows the design process (design, make and evaluate) and has a particular theme and focus from the technical knowledge or cooking and nutrition section of the curriculum. The Design Technology units are organised into a spiral curriculum, with key areas revisited again and again with increasing complexity, allowing pupils to revisit and build on their previous learning.

Lessons incorporate a range of teaching strategies from independent tasks, paired and group work including practical hands-on, computer-based and inventive tasks. This variety means that lessons are engaging and appealing. An adaptive curriculum is available for every lesson to ensure that lessons can be accessed by all pupils and opportunities to stretch pupils' learning are available when required.

Design Technology Impact

The impact of our Design Technology curriculum is constantly monitored through both formative and summative assessment opportunities. We use quizzes and knowledge captures to assess children's learning and development of their knowledge.

Pupils should leave school equipped with a range of skills to enable them to succeed in their secondary education and be innovative and resourceful members of society.

The expected impact of following our Design and Technology curriculum is that children will:

- Understand the functional and aesthetic properties of a range of materials and resources.
- Understand how to use and combine tools to carry out different processes for shaping, decorating, and manufacturing products.
- Build and apply a repertoire of skills, knowledge and understanding to produce high quality, innovative outcomes, including models, prototypes, CAD, and products to fulfil the needs of users, clients, and scenarios.
- Understand and apply the principles of healthy eating, diets, and recipes, including key processes, food groups and cooking equipment.
- Have an appreciation for key individuals, inventions, and events in history and of today that impact our world.
- Recognise where our decisions can impact the wider world in terms of community, social and environmental issues.
- Self-evaluate and reflect on learning at different stages and identify areas to improve.
- Meet the end of key stage expectations outlined in the National curriculum for Design and technology.