

Granby Junior School



Design and Technology Policy

Review Date	Approved by	Governor Minute Reference
July 2027		

Date: July 2026

Introduction

This document is a statement of the aims, principles and strategies for the teaching and learning of Design and Technology at Granby Junior School.

This policy will be reviewed by the Design and Technology Co-ordinator in July 2027 or as required by the School Improvement Plan.

Design and Technology Curriculum Statement:

At our school, Design and Technology inspires children to become creative, innovative and resourceful problem-solvers. We believe that every child should have opportunities to design purposeful products, develop practical skills and evaluate their ideas in order to improve them. Through a broad and ambitious curriculum, pupils learn to think critically, take risks, work collaboratively and persevere when faced with challenges.

Design and Technology provides meaningful opportunities for pupils to apply knowledge from mathematics, science, computing and art within real-life contexts. We encourage children to consider the needs of others, the wider world and sustainability when designing products, helping them to become responsible citizens and future innovators.

By the time pupils leave our school, they will have developed the confidence, resilience and technical knowledge needed to solve problems creatively whilst appreciating the impact design and technology has on everyday life.

Curriculum Aims:

Our Design and Technology curriculum aims to ensure that all pupils:

- Develop creative, practical and technical expertise needed to perform everyday tasks confidently.
- Design innovative products that solve real and relevant problems.
- Build and apply a growing repertoire of knowledge, understanding and practical skills.
- Take risks, experiment with ideas and learn from mistakes.
- Evaluate existing products and their own work to improve future designs.
- Understand key principles of structures, mechanisms, textiles, food and nutrition, and electrical systems.
- Develop resilience, independence and confidence through practical learning.
- Understand how Design and Technology has shaped the modern world and continues to influence society.
- Appreciate sustainable design and consider environmental impacts when making design decisions.

Curriculum Objectives:

Throughout Key Stage 2, pupils will:

Design

- Research and investigate existing products.
- Identify the needs and wants of intended users.
- Generate, develop and communicate ideas using annotated sketches, prototypes, diagrams and digital technologies.
- Plan purposeful designs that meet clear design criteria.

Make

- Select from a range of tools, materials and components.
- Use equipment safely, accurately and independently.
- Develop increasing precision and quality when constructing products.
- Apply technical knowledge across textiles, food, mechanisms, structures and electrical systems.

Evaluate

- Test products against design criteria.
- Reflect on strengths and areas for improvement.
- Seek and respond to feedback.
- Understand how designers and engineers continually improve products.

Technical Knowledge

Children will progressively develop knowledge of:

- Mechanical systems
- Electrical systems
- Structures
- Textiles
- Food preparation and nutrition
- Computer-aided design where appropriate
- Materials and their properties

Implementation

Our Design and Technology curriculum has been carefully sequenced to build knowledge, skills and vocabulary progressively throughout Key Stage 2.

Each unit follows the design process: Investigate → Design → Make → Evaluate

This cyclical approach enables pupils to revisit and refine their ideas whilst developing resilience and independence.

Learning begins with opportunities to explore existing products, identifying effective design features and considering the needs of users. Children are introduced to key technical vocabulary and the knowledge required before beginning practical tasks.

Pupils then generate and communicate their own ideas through sketches, annotated drawings and prototypes. They are encouraged to think creatively whilst working within realistic design criteria and constraints.

During the making stage, pupils develop practical skills through carefully modelled teaching and hands-on experiences. They learn to use tools safely and accurately, select suitable materials and apply technical knowledge to construct increasingly complex products.

Evaluation is embedded throughout the design process rather than being limited to the end of a project. Children regularly test, refine and improve their products, developing resilience and recognising that successful design often involves adaptation and iteration.

Cooking and nutrition are taught across Key Stage 2, enabling pupils to understand healthy eating, food preparation and where food comes from. Practical cooking experiences develop independence alongside important life skills.

Cross-curricular links are planned where meaningful. Pupils apply mathematical understanding through measuring, calculating and scaling, scientific knowledge when selecting materials and investigating mechanisms, and computing skills when using digital technologies to support design. Vocabulary is explicitly taught and revisited to ensure pupils can confidently discuss materials, processes and technical concepts using accurate terminology.

Assessment is ongoing and informs future teaching. Teachers use observation, questioning, discussion and evaluation of practical outcomes to monitor pupils' progress in both knowledge and practical skills. Children are encouraged to reflect on their learning and identify how their designs could be improved.

Our curriculum is inclusive and ambitious for all learners. Appropriate scaffolding, adaptive teaching and opportunities for challenge ensure every pupil can access the curriculum whilst developing confidence, creativity and independence.

Teaching and Learning Style

At Granby Junior School we use a variety of teaching and learning styles in Design and Technology lessons. Our principal aim is to develop the children's knowledge, skills and understanding in design and technology. We ensure that as the children design and create within different projects, they are encouraged to explore and develop their ideas through questioning and by evaluating their work. Children may work as a class, as a co-operative group or individually.

Teachers draw attention to good examples of individual performance and encourage children to evaluate their own ideas and the work of others and to say what they think and feel about them.

Assessment:

Assessment in Design and Technology is ongoing and formative, enabling teachers to identify pupils' understanding, celebrate success and address misconceptions throughout each project. As a school, we do not use formal summative assessments in Design and Technology. Instead, teachers assess pupils through observation, discussion, questioning and the practical application of skills and knowledge during each stage of the design process.

Each pupil completes a Design and Technology project booklet, which records the design journey from initial research and design ideas through to making and evaluation. These booklets provide evidence of pupils' developing knowledge, technical understanding, vocabulary and design thinking over time.

Practical outcomes and collaborative learning are captured within class floor books, celebrating the creative process and showcasing whole-class learning, discussions, investigations and evaluations. Additional evidence, including photographs and videos of practical work, is stored electronically to provide a comprehensive record of pupils' achievements, particularly where outcomes cannot be fully evidenced on paper.

Teachers use a feedback book to record formative assessment, identify next steps, celebrate strengths and note any misconceptions or pupils requiring further support or challenge. This informs future planning and ensures teaching remains responsive to the needs of all learners.

Pupil voice also plays an important role in assessment. Children are encouraged to evaluate their own products, reflect upon the effectiveness of their designs and suggest improvements, developing resilience and an understanding that successful design is an iterative process.

Monitoring:

The Design and Technology Subject Leader is responsible for monitoring the quality of teaching and learning across the school to ensure the curriculum is ambitious, progressive and consistently delivered.

Monitoring activities may include:

- Reviewing pupils' Design and Technology project booklets to ensure progression in knowledge, skills and vocabulary.
- Monitoring class floor books and digital evidence to celebrate outcomes and ensure appropriate curriculum coverage.
- Reviewing teachers' feedback books to identify strengths, common misconceptions and areas for curriculum development.
- Learning walks and lesson visits to observe teaching, practical experiences and pupil engagement.
- Discussions with pupils to evaluate their understanding of the design process, technical vocabulary and knowledge retained over time.
- Curriculum planning reviews to ensure coverage and progression across Key Stage 2.
- Supporting colleagues through professional development, sharing effective practice and providing guidance where appropriate.

Findings from monitoring activities inform subject action planning, staff training and future curriculum development, ensuring all pupils receive a high-quality Design and Technology education that develops creativity, technical competence and confidence as designers and makers.

Inclusion:

At Granby Junior School, every pupil is entitled to experience an ambitious, practical and inclusive Design and Technology curriculum that develops creativity, problem-solving, resilience and technical skills. We believe that every child can succeed in DT and that high-quality inclusive teaching enables all pupils to participate, achieve and become confident designers and makers.

Teachers understand the diverse strengths, interests and barriers that pupils may bring to their learning and use ongoing assessment to identify and respond to individual needs. Through the graduated approach of assess, plan, do and review, teaching is adapted to remove barriers while maintaining high expectations for every pupil.

Inclusive DT teaching is rooted in high-quality classroom practice. Lessons are carefully planned so that all pupils access the same ambitious curriculum through adaptive teaching strategies that support learning without reducing challenge. These include clear modelling of practical techniques, carefully sequenced learning, visual instructions, scaffolded design processes, adapted tools and equipment where appropriate, targeted questioning, collaborative learning and opportunities for pupils to make informed choices throughout the design, make and evaluate process. Reasonable adjustments are made to ensure that all pupils can participate safely and successfully in practical activities while promoting independence, confidence and resilience.

Assessment is used throughout lessons to inform responsive teaching, identify misconceptions and celebrate progress in both practical skills and design thinking. Where additional support or challenge is required, teachers work collaboratively with the SENDCo, families and, where appropriate, external professionals to ensure every pupil is supported to succeed.

Our inclusive approach enables all pupils, including those with SEND, disadvantaged pupils, pupils learning English as an additional language and those with additional talents or interests, to fully engage with the Design and Technology curriculum. By removing barriers, valuing creativity and maintaining consistently high expectations, we ensure that every child develops the knowledge, skills and confidence to design, create, evaluate and solve real-world problems.

Diversity:

Our Design and Technology curriculum celebrates diversity by exposing pupils to a wide range of designers, technologies, cultures and traditions from across the world and throughout history. Learning is carefully planned to broaden pupils' understanding of how design responds to different environments, needs and communities. For example, pupils investigate earthquake-resistant structures, exploring how engineers design buildings in regions affected by natural disasters, and study bridges from different countries to understand how geography and purpose influence design. Through cam mechanisms and LEGO robotics, pupils discover how technology and engineering continue to shape the modern world, while weaving introduces traditional craft techniques practised by many cultures. Food and nutrition units explore the importance of seasonality and enable pupils to prepare recipes inspired by different historical periods, including Ancient bread recipes and Victorian recipes, helping children understand how culture, history, available resources and technological advances have influenced food production and design over time. By exploring a diverse range of products, people and design challenges, pupils develop curiosity, respect for different perspectives and an appreciation of the role Design and Technology plays in improving lives locally and globally.

Health and Safety:

It is the responsibility of the teacher to manage the risks involved in an activity and make appropriate arrangements to safeguard the pupils' health and safety. Such arrangements would include careful adult supervision when using tools in the classroom.

Resources:

Basic equipment and materials e.g. scissors, glue, rulers etc can be found in each classroom. More specialist equipment and materials, including woodworking and tools, can be located in the main resources cupboard in the main building.

Recycled materials e.g. fabric, boxes, cardboard tubes, plastics etc are acquired as and when needed. In accordance with health and safety advice we do not collect or use toilet rolls or egg boxes in school.

Cooking:

Children will be provided with the opportunity to acquire knowledge in healthy eating and about the importance of a balanced and varied diet. During this time, children prepare and make a savoury dish (they will be able to access the ovens for this). Furthermore, as part of ECO, children get the opportunity to learn about food sources and to grow their own fruit and vegetables in the school gardens.

Computing:

We make provision for the children to use the computer and other ICT resources where appropriate. We incorporate computing in our design and technology planning where appropriate. Children in Year 6 will used CAD to design and control Lego Spike kits.