FULBOURN PRIMARY SCHOOL

Our Approach to...

Design and technology

Aims:

- To support all children to develop a range of practical skills safely and purposefully, building on knowledge from across the wider curriculum to solve real-life design problems.
- To inspire creativity, curiosity, problem solving, critical thinking and reflection, encouraging children to improve their ideas and products throughout the design process.
- To help children see themselves as designers and understand the importance and relevance of design and technology in the wider world.
- To teach children to design purposeful products for identified users, considering needs, preferences, design criteria and the context in which a product will be used.
- To develop progressively children's technical knowledge and skills across a broad range of materials, structures, mechanisms, textiles, systems and food technology.
- To enable children to evaluate their own and others' products objectively, learn from testing and feedback, and develop courage and independence when managing appropriate risks.

Research base:

- Ofsted. (2011). Meeting technological challenges: school design and technology provision. https://www.gov.uk/government/publications/meeting-technological-challenges-school-design-and-technology-provision
- Design and Technology Association. Reimagining D&T: Our vision. https://www.designtechnology.org.uk/
- Consortium of Local Education Authorities for Schools Science .https://www.cleapss.org.uk/
- Teacher Handbook: SEND (NASEN).

Procedures:

- Designers and Design Briefs – In DT, we teach children to become problem-solvers and encourage them to see themselves as designers from the outset. Projects should begin with a meaningful problem or design brief, with a clear purpose and an identified user or audience. Children investigate needs, explore existing products and use their findings to inform design decisions.
- The Design Process – Children are taught to work through an iterative design process: research, generate and communicate ideas, make, test, evaluate and improve. This process should be visible throughout each project rather than treated as a sequence that ends once an item has

been made. Children should be encouraged to explain their decisions, learn from unsuccessful attempts and refine their ideas in response to testing and feedback.

Symbol								
	research	design	evaluate	textiles	mechanisms	cooking and nutrition	structures and woodwork	electrical systems

- Progression – In Key Stage 1, children use the design process to test their ideas while considering the needs of others. They begin to develop practical skills, explore materials and mechanisms, and communicate simple design ideas. In Key Stage 2, children learn and apply increasingly sophisticated technical skills to solve a wider range of problems, communicate more complex ideas and evaluate their work objectively, as a designer would. Knowledge and skills should build on prior learning across year groups.
- Practical and Technical Skills – Practical skills are explicitly taught, modelled and revisited. Across the curriculum, children should have opportunities to work with a broad range of materials and techniques, including structures, mechanisms, textiles, electrical systems and food technology. They learn to select appropriate tools, materials, components and ingredients, and to measure, cut, shape, join, assemble and finish with increasing accuracy. Technical choices should be linked to the purpose and quality of the product.
- Food Technology and Safety – Food technology is an important part of our DT curriculum. Children develop practical food preparation skills and an understanding of healthy eating, nutrition and where food comes from. At Fulbourn, children have opportunities to develop food technology skills every term, using our purpose-built DT and cooking room. Teachers must explicitly teach and supervise safe and hygienic practices, including the appropriate use of tools and kitchen equipment.
- Risk, Courage and Independence – Our DT curriculum is designed to excite curiosity and creativity while developing children's courage and independence in managing risk. Teachers should model safe working practices, establish clear routines and ensure that tools and equipment are appropriate to pupils' ages and abilities. Children should increasingly understand how to identify hazards, make safe choices and take responsibility for their work.
- Vocabulary and Communication – Subject-specific vocabulary is explicitly introduced, modelled and revisited. Children should use technical language when discussing materials, tools, mechanisms, processes and products. Unit organisers, design pages, recipes and word banks support children to read and apply vocabulary accurately. Children communicate ideas through discussion, annotated drawings, plans, templates, prototypes and models, as appropriate to the task.
- Blocked Teaching and Enrichment – DT is often taught in blocks, with lessons taking place more frequently over a shorter period rather than weekly. This allows children to sustain a design project and move through its stages with continuity. Projects should draw on learning from other curriculum areas where meaningful, including mathematics, science, computing and art. Links to real products, designers, inventions and everyday technologies help children understand the relevance of DT in the wider world.

Reading:

- Reading and understanding technical vocabulary, supported by unit organisers and visual word banks.

- Reading and applying vocabulary in recipes, design pages, instructions and explanations of processes.
- Using reading to conduct research into users' needs, existing products, materials and design solutions.
- Following written instructions safely and accurately, including recipes and step-by-step making processes.
- Reading and discussing evaluations of products to develop subject vocabulary, reasoning and metacognition.

Inclusion by design:

- Ensure all children can access DT activities and use tools, equipment and materials safely, with appropriate adult support and reasonable adjustments.
- Use visuals, demonstrations, worked examples and key vocabulary prompts in DT booklets and unit organisers to make processes and expectations clear.
- Create prototypes and trial tasks before lessons so that resources, equipment, timings and steps can be adapted to meet pupils' needs.
- Provide different ways for children to communicate ideas and demonstrate learning, including oral explanation, annotated drawings, models and practical demonstration.
- Plan collaborative tasks with purposeful roles so that all children can contribute meaningfully and recognise the value of different ideas and skills.
- Offer a rich and broad DT curriculum, including woodwork, food technology, textiles and other technical experiences, while maintaining high expectations for every child.

Glossary:

Design: The process of generating, developing and communicating ideas for products that meet a need, solve a problem or respond to a user's preferences.

Design criteria: The requirements a product should meet to be successful, based on its purpose and the needs of its intended user.

Evaluate: The process of reflecting critically on and judging the effectiveness of a product, process or idea against its purpose, criteria and user needs.

Prototype: An early model or version of a product used to test ideas, identify problems and make improvements.

Research: The process of gathering, exploring and analysing information to inform purposeful design decisions.

User: The person or group for whom a product is designed, whose needs and preferences help shape design decisions