



St Joseph's Design and Technology Curriculum

Curriculum Overview

Researching, designing, making and evaluating purposeful products

Design and Technology at St Josephs

At St Joseph's, Design and Technology gives children opportunities to solve practical problems and create purposeful products. Children learn to consider the needs of a user, develop ideas, select tools and materials, make safely and evaluate how well their product meets its intended purpose.

Our curriculum develops technical knowledge alongside the creative and practical skills pupils need to work as designers and makers. Children investigate existing products, test ideas, take measured risks and improve their work through feedback and evaluation.

Curriculum Intent

We aim to develop creative, resourceful and reflective designers. By the end of Year 6, pupils should research a need, write and apply design criteria, communicate accurate ideas, use tools and materials safely and evaluate a finished product against its purpose, user and brief.

- Build knowledge of the design process progressively from EYFS to Year 6.
- Develop technical knowledge of structures, mechanisms, textiles, electrical systems and food preparation.
- Help pupils understand how products are designed for different users, purposes and environments.
- Enable pupils to make accurately, work safely, evaluate critically and improve products through testing and feedback.

The Design and Technology Curriculum

The curriculum combines technical knowledge with a clear design process. Five connected areas run through learning from EYFS to Year 6 and are applied through purposeful practical projects.

Curriculum area	What children learn
Research	Identifying the user and purpose, investigating existing products and using research to develop increasingly precise design criteria.
Design	Generating, drawing, labelling and annotating ideas, choosing materials and developing accurate sketches, diagrams and measurements.
Make	Selecting tools and materials, measuring, marking, cutting, shaping, joining, assembling and finishing products safely and accurately.
Evaluate	Testing products against the design brief, gathering feedback, comparing outcomes and explaining how a product could be improved.

Curriculum Implementation

Design and Technology is taught termly through focused practical learning, including two DT days and one extended DT week each year. Teachers identify the technical knowledge, vocabulary and practical skills pupils need and connect each project to previous experience.

- Projects follow the three I's approach: imitation, innovation and invention, moving from investigation and modelling towards an increasingly independent product.
- Children investigate existing products and significant designers or inventors before developing their own design criteria and ideas.
- Teachers model the safe use of tools, equipment, materials and cooking techniques before children apply them independently.
- Practical tasks cover structures, mechanisms, textiles, electrical systems and food and nutrition across the school.
- Research, design, make and evaluate skills are revisited so children work with increasing accuracy, control and independence.
- Children explain their choices, test prototypes and final products, respond to feedback and judge success against the user, purpose and design brief.

Progression Through School

Phase	Main focus	Developing as a designer
EYFS	Exploring materials and making	Children explore how things work, use simple tools and materials, build and join in different ways and talk about what they like and dislike.
Key Stage 1	Purposeful products and simple mechanisms	Pupils identify a user and purpose, draw ideas, select materials, cut, shape and join, and evaluate products such as bookmarks, moon buggies, boats and park equipment.
Lower Key Stage 2	Design criteria and technical control	Pupils develop design criteria, annotate ideas, measure more accurately and use mechanisms, structures and simple electrical systems in packaging, catapults, torches and castles.
Upper Key Stage 2	Research, precision and independent evaluation	Pupils research users, adapt designs, use detailed sketches and diagrams, select tools and processes precisely and evaluate water wheels, bridges, mechanical machines and alarm systems.

The Design Process

Across the curriculum, children learn that successful products respond to a need. They research users, develop criteria, communicate ideas, make safely, test function and use evaluation to refine both the design and final outcome.

- EYFS children investigate everyday objects, explore materials, use simple templates and talk about their preferences and creations.
- Key Stage 1 pupils identify the user and purpose, draw and label ideas, select tools and materials, use simple mechanisms and judge whether a product matches the design.
- Key Stage 2 pupils research needs, write design criteria, annotate accurate designs, use a wider range of tools and joining methods and critically evaluate products using testing and feedback.

Key Design Projects

EYFS: Gingerbread people, construction challenges and a moving Supertato.

Years 1 and 2: Bookmarks, moon buggies, park equipment and boats that float.

Years 3 and 4: Branded boxes, catapults, torches and lamps, and replica castles with moving features.

Years 5 and 6: Water wheels, load-bearing bridges, mechanical flying machines and electrical alarm systems.

Curriculum Themes

Three principles connect Design and Technology learning across the school and guide every project.

User and purpose

Children identify who a product is for, what it must do and the features that will make it useful and appealing.

Function and technical knowledge

Children understand how materials, structures, mechanisms, electrical components and ingredients work together effectively.

Innovation and improvement

Children test ideas, learn from designers and inventors, respond to feedback and refine products to improve performance.

Curriculum Impact

By the end of Key Stage 2, children will have developed secure knowledge of the design process and a growing range of technical skills. They will research needs, create accurate designs, select appropriate tools and materials, make safely and produce functional outcomes for a clear user and purpose.

Pupils will also be able to explain and justify their choices, test whether a product meets its design criteria, use feedback constructively and identify realistic improvements. In food technology, they will understand healthy choices, sustainability and safe preparation.