



The Design Technology Curriculum

Vision

Learning Design and Technology is key to creating innovative and critical learners who are confident to use a range of tools and equipment in order to create a product which solves a problem or fulfils a need in society.

The Design and Technology Curriculum will:

- showcase the subject as a process
- encourage children to be innovative in their learning
- use hands-on learning as a vehicle for gaining knowledge
- develop the progression of technical vocabulary
- utilise ongoing and formal assessment to inform future planning

Intent

Design and technology lessons aim to inspire pupils to be innovative and creative thinkers who have an appreciation for the product design cycle through ideation, creation, and evaluation. We want pupils to develop the confidence to take risks, through drafting design concepts, modelling, and testing and to be reflective learners who evaluate their work and the work of others. 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.

Implementation

The Design and technology National curriculum outlines 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 has 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 and technology attainment targets under five subheadings or strands:

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

Our design and technology learning is based on the Kapow scheme of work and has a clear progression of skills and knowledge within these five strands across each year group.

Detailed, school specific, medium-term planning breaks this down even further showing a lesson by lesson breakdown including suggestions for support and assessment for each session.

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
- Digital world

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. We have chosen 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 appeal to those with a variety of learning styles.

Impact

Following the design and technology lessons will ensure 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 Design and technology lessons 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.
- Help meet the end of key stage expectations outlined in the National curriculum for Computing.

We measure the impact of our curriculum through the following methods:

- Observing the children during practical, hands-on learning.
- Marking written work.
- Interviewing pupils about their learning.
- Learning walks
- Subject tracking and monitoring

The Science subject leader will continually monitor the impact Design and Technology teaching is having on the children's learning through work scrutiny, to ensure the progress of knowledge and skills is being taught. They will also ensure the knowledge taught is retained by the children and continually revisited and that the learners are able to apply the skills they have been taught to a variety of different settings, showing independence with their learning. Impact will also be measured through key questioning skills built into lessons, informal lesson assessment and summative assessments, such as unit quizzes and knowledge catchers, aimed at targeting next steps in learning.

Resources

National Curriculum for Design and Technology

CJS Design and Technology Long-Term Plan

Kapow progression of knowledge and skills (condensed curriculum)

CJS Medium Term Planning by year group.