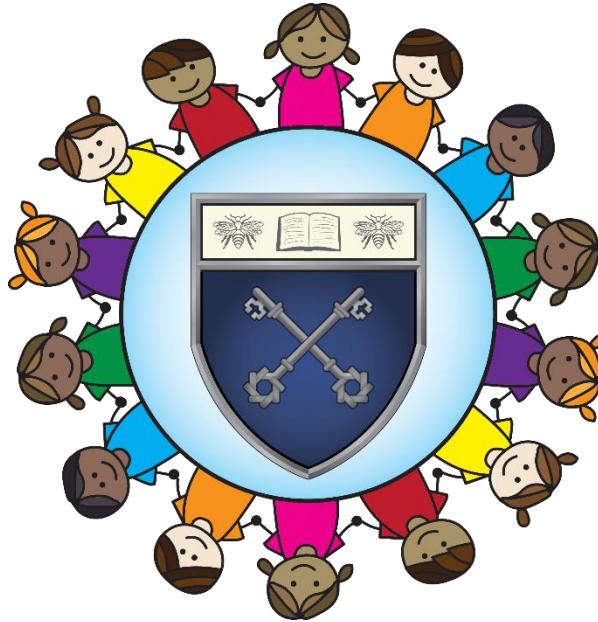


Design and Technology Curriculum



Intent, Implementation
and Impact

Purpose

Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

Aims

The national curriculum for design and technology aims to ensure that all pupils:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- critique, evaluate and test their ideas and products and the work of others
- understand and apply the principles of nutrition and learn how to cook

Intent

At Longshaw, we intend to

- Encourage children to critically evaluate existing products and then take risks and innovate when designing and creating solutions to different problems.
- Encourage children to consider the effectiveness of their designs and requirements of the product.
- Inspire children through a broad range of practical experiences.
- Provide children with a variety of opportunities, which will help them to explore the methods taught within design and technology.

- Encourage children to use their creativity and imagination, to design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values.
- Ensure our children have access to a high quality design and technology curriculum, which provides memorable and enjoyable experiences.
- Ensure children are confident within their skills to produce their own products.
- Support all children to become independent and imaginative learners, who are able to think critically and creatively.
- Provide opportunities for children to evaluate key events and individuals who have helped shape the world, showing the real impact of design and technology on the wider environment thereby helping to inspire children to become the next generation of innovators.

Implementation

The National Curriculum organises the Design and technology attainment targets under five subheadings or strands:

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

Within The National Curriculum it 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 (listed above). *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.

Kapow Primary's Design and Technology scheme has a clear progression of skills and knowledge within these five strands across each year group.

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
- Cooking and nutrition (Food)
- Electrical systems (KS2) and
- Digital world (KS2)

Planning

1. Long term: National Curriculum and The Projects on a Page scheme of work by Design and Technology organisation.

2. Medium term: Yearly overview, updated annually in response to data and in house monitoring of teaching & learning.

3. Short term:

- Each lesson includes a clear objective

- Short term planning is supported by the use of Kapow scheme of work.

Cultural Capital

Our DT curriculum is enhanced further with visitors, STEM talks and a Healthy Eating week to improve children's learning experiences where possible.

Impact

The impact of the Design and Technology curriculum will be monitored and evaluated in specific ways by the Science subject leader/s and SLT, as well as reporting to the governing body.

Examples of how standards and achievements will be monitored are as follows:

- children's work from across the school with an indication of where it meets expectations – for example – pupil's books
- photographs recording displays, artwork, visits and visitors;
- teachers' plans showing evidence of quality, creative and challenging Science;
- records of scrutiny of work and lesson observations / learning walks
- plans and work from enrichment activities
- pupil voice

The purpose of the monitoring and evaluation of impact is to monitor standards and achievements and to ensure that all children are experiencing creative and challenging Design and Technology, enabling them to achieve ambitious end goals:

- Pupils 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.
- Pupils understand and apply the principles of healthy eating, diets, and recipes, including key processes, food groups and cooking equipment.
- Pupils self-evaluate and reflect on learning at different stages and identify areas to improve.
- Pupils will understand the functional and aesthetic properties of a range of materials and resources.
- Pupils will understand how to use and combine tools to carry out different processes for shaping, decorating, and manufacturing products.
- Pupils will have an appreciation for key individuals, inventions, and events in history and of today that impact our world.
- Pupils recognise where our decisions can impact the wider world in terms of community, social and environmental issues.
- Children are responsible, competent, confident and creative users of information and communication technology.
- Children will be able to apply the British values of democracy, tolerance, mutual respect, rule of law and liberty when using digital systems.