



Kington Primary School

Design and Technology Policy



Our School Vision

Developing caring, confident and creative children who achieve excellence.

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The Importance of Design and Technology

Design and Technology is an inspiring, rigorous and practical subject. Design and Technology encourages children to learn to think and intervene creatively to solve problems both as individuals and as members of a team.

Our Design and Technology Intent:

We aim to develop lively, enquiring minds encouraging pupils to become self-motivated, confident and capable in order to solve problems that will become an integral part of their future.

At Kington Primary School, we 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. We aim to, wherever possible, link work to other disciplines such as maths, English, geography, history, science, computing and art. The children are also given opportunities to reflect upon and evaluate past and present design technology, its uses and its effectiveness, and are encouraged to become innovators and risk-takers.

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.

Outcomes

In Design and Technology education at Kington Primary School we aim to deliver a curriculum which is accessible to all and that will maximise the outcomes for every child so that they know more, remember more and understand more. The aims of Design and Technology in our school are to:

- *Develop new practical skills.*
- *Develop awareness/need for Health and Safety.*
- *Develop an understanding of food hygiene issues.*
- *Develop problem solving/thinking skills.*
- *Develop communication skills.*
- *Develop social skills (independent and co-operative).*
- *Extend existing/new practical skills.*
- *Learn and use appropriate technological vocabulary.*
- *To be aware of technology in its wider contexts.*
- *Develop skills to compliment other curriculum areas (Maths, English etc.).*
- *Develop self-worth/esteem.*
- *Produce quality outcomes.*
- *To realise learning can be fun!*
- *To see what they can achieve!*

Implementation of the Design and Technology Curriculum

We carry out curriculum planning in Design and Technology in three phases (long-term, medium-term and short-term). Our Design and Technology curriculum is delivered using the new Early Years Learning goals and the 2014 National Curriculum Programmes of Study for Design and Technology as a tool to ensure appropriate pace, progression and coverage of the subject. This coverage is reviewed continually by class teachers and planning is adjusted accordingly to ensure appropriate coverage of all Design and Technology strands.

Through a variety of creative and practical activities, we teach the knowledge, understanding, key vocabulary and skills needed to engage in an iterative process of designing and making. The children work in a range of relevant contexts (for example home, school, leisure, culture, enterprise, industry and the wider environment).

Foundation Stage

The programme of study for the Foundation stage is set out in the EYFS Framework 2023. During the Early Years Foundation Stage, the essential building blocks of children's design and technology capability are established. There are many opportunities for carrying out D&T-related activities in all areas of learning in the EYFS. Specifically, 'Creating with Materials' is identified as a strand within the specific area 'Expressive Arts and Design'. By the end of the EYFS, most children should be able to:

- Disassembling and constructing with a purpose in mind, being curious as to how things work
- Use simple tools and techniques competently and appropriately
- Build and construct with a wide range of objects, selecting appropriate materials and resources and adapting their work when necessary
- Select the tools and techniques they need to shape, assemble and join materials they are using. Using the language around designing and making to talk about their creations
- Take part in cooking and baking

Key Stage 1 and 2

The Programmes of study for Design and Technology are set out year by year for Key Stages 1 and 2 in the new National Curriculum (2014).

Years 1 and 2 - Key Stage 1

Through a variety of creative and practical activities, pupils are taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They work in a range of relevant contexts. When designing and making, pupils are taught to:

Design

- ♣ design purposeful, functional, appealing products for themselves and other users based on design criteria
- ♣ generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology

Make

- ♣ select from and use a range of tools and equipment to perform practical tasks
- ♣ select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

Evaluate

- ♣ explore and evaluate a range of existing products
- ♣ evaluate their ideas and products against design criteria

Technical knowledge

- ♣ build structures, exploring how they can be made stronger, stiffer and more stable
- ♣ explore and use mechanisms, in their products.

Years 3 to 6 - Key Stage 2

The principal focus of Design and Technology teaching in Key Stage 2 is to ensure that pupils:

Design

- ♣ use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups
- ♣ generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

- ♣ select from and use a wider range of tools and equipment to perform practical accurately
- ♣ select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

- ♣ investigate and analyse a range of existing products
- ♣ evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
- ♣ understand how key events and individuals in design and technology have helped shape the world

Technical knowledge

- ♣ apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- ♣ understand and use mechanical systems in their products
- ♣ understand and use electrical systems in their products
- ♣ apply their understanding of computing to program, monitor and control their products.

Cooking and Nutrition

As part of their work with food, pupils are taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life. Pupils are taught to:

Key stage 1

- ♣ use the basic principles of a healthy and varied diet to prepare dishes
- ♣ understand where food comes from.

Key stage 2

- ♣ understand and apply the principles of a healthy and varied diet
- ♣ prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
- ♣ understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

Cross curricular

Throughout the whole curriculum, opportunities to extend and promote Design and Technology are sought.

English

Design and Technology contributes significantly to the teaching of English in our school by actively promoting the skills of reading, writing, speaking and listening. Some of the recipes that we use in literacy are part of Design and Technology. Children develop oracy through discussing engineering questions or presenting their findings to the rest of the class and presenting their work in class assemblies. They develop their writing ability by composing reports and letters and through using writing frames.

Mathematics

Design and Technology teaching contributes to the teaching of mathematics in a variety of ways. Children learn to use numbers when developing measuring skills; whether in weight, length, volume or more complex mathematical formulas, such as for area and perimeter, speed and acceleration. Children learn to interpret information presented in graphical or diagrammatic form.

Computing

We use computing in Design and Technology teaching where appropriate and we meet the statutory requirement for children to use ICT as part of their work other subjects at Key Stage 2. Children use ICT in Design and Technology to enhance their skills in data handling and in presenting written work, and they research information using the Internet. Children have the opportunity to use the digital camera to record and use photographic images.

Personal, social and health education (PSHE) and citizenship

Design and Technology contributes significantly to the teaching of personal, social, citizenship and health education. Children develop self-confidence by having opportunities to explain their views on a number of social questions.

Teaching and Learning

Design and Technology is taught through discrete lessons and through topic work throughout the EYFS, Key Stage 1 and 2. Please refer to our Long Term Plan for Design and Technology.

The curriculum is delivered by class teachers. All work is differentiated in order to give appropriate levels of work and children are taught in ability or mixed ability groups. There is one form entry with each class teacher taking responsibility for their year. Planning is based upon the new National Curriculum (2014). Programmes of Study should inform medium term plans and subsequently weekly planning. Class teachers are responsible for the relevant provision of their own classes and individually develop weekly plans which give details of learning objectives and appropriate differentiated activities. Although planned in advance, they are adjusted on a regular basis to better suit the arising needs of a class and individual pupils.

Studying Design and Technology includes the use of a broad range of knowledge, skills, and understanding, and prompts engagement in a wide variety of activities. Pupils design and make products that solve real and relevant problems within a variety of contexts. Through evaluation of past and present Design and Technology, they develop a critical understanding of its impact on daily life and the wider world.

Inclusion and equal opportunities

All children are provided with equal access to the Design and Technology curriculum. We aim to provide suitable learning opportunities regardless of gender, ethnicity or home background. All children will have their specific needs met through differentiated work in conjunction with targets. TA support time is planned for and provided in relation to identified needs for individuals and groups.

Resources

All classrooms have Design and Technology books, paints and colours, and a variety of paper and card materials. Resources which are not used or required regularly are stored centrally and accessed by teachers at the beginning of a topic. We also use a range of apps and web-based resources to help with consolidation and support in school.

Assessment

Children in the Foundation Stage are assessed in accordance with the EYFS Framework.

At Kington Primary School, assessment in Design and Technology comprises of teacher assessment during the delivery of lessons. Children are given tasks linked to the NC, and assessed against these. It is the responsibility of each individual class teacher to implement this through planning activities linked to the Design and Technology National Curriculum. At the end of a unit of work teachers use assessment sheets to record children's progress.

Marking and presentation

Teachers are expected to adhere to the school's marking policy when marking books and presentation policy when guiding children as to how to present their work.

Impact - Monitoring and Evaluating the Design and Technology Curriculum

The subject coordinator, alongside the senior management team, are responsible for monitoring and evaluating curriculum progress. This is done through book scrutiny, planning scrutiny, lesson observations, pupil interviews, staff discussions and audit of resources.

Review

The Design and Technology policy will be reflected in our practice. The policy will be reviewed annually.