

Curriculum Intent Statement - D&T

At Byley Primary School we aim to provide all children with a broad and balanced curriculum which prepares them for life beyond primary education. 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. Design and Technology is an inspiring, rigorous and practical subject. It can be found in many of the object's children use each day and is a part of children's immediate experiences. Design and Technology encourages children to learn to think and intervene creatively to solve problems both as individuals and as members of a team.

At Byley Primary School the Design and Technology curriculum combines skills, knowledge, concepts and values to enable children to tackle real problems. It can improve analysis, problem solving, practical capability and evaluation skills. We aim to, wherever possible, link work to other disciplines such as mathematics, science, engineering, computing and art. The children are encouraged to become innovators and risk-takers. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

Aims

At Byley Primary School the 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.

Implementation

How DT is taught at Byley Primary School

The Design Technology teaching throughout Byley Primary School follows the National Curriculum design, make and evaluate cycle. Through this they acquire a broad range of technical knowledge and vocabulary whilst also drawing on disciplines such as Mathematics, Science, Engineering, Computing and Art. Each of these elements should be given equal weight and taught to a high standard. Evidence of each of these strategies should be found in books/folders and photographs and should show clear progression across the Key Stages.

Design

Rooted in real-life, relevant contexts, children design products with a purpose and an intended user of the products in mind. They use research and develop design criteria to inform the design of innovative, functional, appealing and fit-for-purpose products. Planning should be through appropriate formats ie. annotated sketches, patterns/templates, communicating ideas verbally and prototypes/'mock-ups'. In some cases, designs will be computer aided.

Make

Whilst making, children will be given a wide range of tools, materials and components including textiles, construction equipment and ingredients. They build and apply a repertoire of knowledge, understanding and skills (ie. cutting, shaping, joining and finishing) in order to make high-quality prototypes and products for a range of users.

Evaluate

Children at Byley Primary School learn to critique, evaluate and test their ideas and products as well as the work of others. They investigate and analyse a range of existing products to understand how individuals and key events have shaped design and technology globally. In addition, they learn to evaluate their work against their own design criteria and consider the views of others in order to improve their work.

Level expected at the end of EYFS

Expressive Arts and Design (Exploring and Using Media and Materials)

Children safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.

Expressive Arts and Design (Being Imaginative)

Children use what they have learnt about media and materials in original ways, thinking about uses and purposes. They represent their own ideas, thoughts and feelings through design and technology, art, music, dance, role play and stories.

Physical Development (Moving and Handling)

Children handle equipment and tools effectively, including pencils for writing.

Stage 1 National Curriculum Expectations Design

Pupils should be taught to:

- 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**
- Pupils should be taught to:
- select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing];
- select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.
- **Evaluate**
- Pupils should be taught to:
- explore and evaluate a range of existing products;
- evaluate their ideas and products against design criteria.
- **Technical Knowledge**
- Pupils should be taught to:
- build structures, exploring how they can be made stronger, stiffer and more stable;
- explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.
- **Cooking and Nutrition**
- Pupils should be taught to:
- use the basic principles of a healthy and varied diet to prepare dishes;
- understand where food comes from.

Key Stage 2 National Curriculum Expectations Design

Pupils should be taught to:

- 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**
- Pupils should be taught to:
- select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], 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**

- Pupils should be taught to:
- 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
- Pupils should be taught to:
- apply their understanding of how to strengthen, stiffen and reinforce more complex structures;
- understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages];
- understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors];
- apply their understanding of computing to program, monitor and control their products.
- Cooking and Nutrition
- Pupils should be taught to:
- 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.

Impact

What will this look like at Byley Primary School?

Assessment of children's learning in Design Technology takes the form of ongoing monitoring of children's understanding, knowledge and skills using key questioning skills built into lessons by the class teacher. Child-led assessment such as success criteria and evaluation grids are also used to inform the differentiation, support and challenge required by the children. Summative assessment is conducted termly by class teachers across each year group and is aimed at targeting next steps in learning as well as informing the subject leader of progress and skills/knowledge still to be embedded.

Design Technology is also monitored by the subject leader throughout the year in the form of collection of evidence (photos), book monitoring, looking at outcomes measured against age-based progression and pupil interviews to discuss their learning. This tangible evidence aids understanding and establishes the impact of the teaching taking place.

The impact of using the full range of tools and resources, will be seen across the school with an increase in the profile of Design and Technology. Children will know more, remember more and understand more about DT. Children will retain prior-learning and explicitly make connections between what they have previously learned and what they are currently learning. It is our intention that the learning environment across the school will be more consistent with design and technology technical vocabulary displayed, spoken and used by all learners.

By the time children leave our school they will have:

- An excellent attitude towards learning and independent working.
- The ability to use time efficiently and work constructively and productively with others.
- The ability to carry out thorough research, show initiative and ask questions to develop a detailed knowledge of users' needs.
- The ability to act as responsible designers and makers, working ethically, using a range of materials carefully and working safely.
- A thorough knowledge of which tools, equipment and materials to use to make their products.
- The ability to apply mathematical knowledge and skills accurately.
- The ability to manage risks, be resourceful, innovative and enterprising to manufacture products safely and hygienically.

- A passion for the subject.

Children will be equipped with skills and knowledge that will enable them to be ready for the curriculum at Key Stage 3 and for life as a capable citizen in the wider world.