



Pilgrims' Way Primary School
Design and Technology Policy 2023
'Irresistible learning for all'
'Aspire, Resilient, Success, Respect, Positive'



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Design and Technology in primary schools develops young children's skills and knowledge in design, structures, mechanisms, electrical control and a range of materials, including food. Design and Technology encourages children's creativity and encourages them to think about important issues.
(KAPOW – Supported by the Design and Technology Association)

Schools DT Values

Design and Technology is an inspiring and practical subject for us at Pilgrims' Way Primary School. We aim to ignite creativity and imagination in all pupils, through an enriched, broad, and balanced curriculum. Our teaching enables pupils to take risks, be resourceful and be innovative. We encourage our parents to help them support their children's learning and share their skills with the school to build on the whole school community.

Intent:

At Pilgrims' Way Primary school we aspire to use opportunities within our design and technology curriculum to ensure that pupils draw on their creativity and imagination when designing and making products that have a real and relevant function. The school, as a whole, follows the KAPOW curriculum topics which covers the National Curriculum standards. The sequence and structure of learning has been organised, with subject links where possible, with consideration of the technical knowledge and embedded retrieval practices to deepen the children's knowledge and understanding of the full process involved in designing.

Implementation:

The learning and teaching practices for Design Technology at Pilgrims' Way are supported using published materials from Kapow. Each year group has five topic areas (except nursery and EYFS) to cover throughout the year with them being sequenced and linked to best fit with each year groups main topic. We follow the design, make, and evaluate process, teaching a clear progression of skills and knowledge through six key areas (mechanisms, structures, textiles, cooking and nutrition, electrical systems and digital world). The curriculum is designed to help pupils to remember what they have been taught over the long term whilst integrating new technical knowledge and skills. Retrieval practices are embedded within our teaching and learning structure to increase the learning, retention and recall of technical and practical knowledge; teachers use a variety of strategies within lessons and units such as quizzing, and retrieval practices to ensure the children's understanding, identify and challenge misconceptions. All design and technology units allow for the

pupils, at all stages of their design process, to fully immerse themselves. Planned opportunities for pupils to research and test existing products out will inspire their own designs that they will continuously evaluate. Continuous time to make their product will ensure a fluid process and creation.

Impact of the Curriculum:

The students at Pilgrims' Way Primary School will have a keen interest and love of design and technology, encouraged by the range of topics across the curriculum. The curriculum will enhance pupil's skills and knowledge in design, structures, mechanisms, electrical control, textiles and food. Pupils skills of design, make, evaluate and technical knowledge will be evidenced across all year groups and show clear progress and development in the pupils' learning.

Teaching and Learning:

In EYFS children will:

Begin to explore, learn and apply a range of design technology skills to be learnt through topic opportunities. Nursery and Reception follow the statutory Early Years Framework 2023 to teach DT skills and knowledge. The Early Learning Goals support teachers in assessing children's development and the following Early Learning Goals can be linked to supporting learning foundations for design technology:

ELG: Fine Motor Skills

Children at the expected level of development will:

- Use a range of small tools, including scissors, paint brushes and cutlery.
- Begin to show accuracy and care when drawing.
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ELG: Creating with Materials

Children at the expected level of development will:

- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.
- Share their creations, explaining the process they have used.
- Make use of props and materials when role playing characters in narratives and stories.

In KS1 children will:

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in the process of designing and making. They should work in a range of relevant contexts (for example: the home and school, gardens and playgrounds, the local community, industry and the wider environment).

When designing and making, pupils should be 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 (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

- 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 (for example: levers, sliders, wheels and axles), in their products.

In KS2 children will:

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in the process of designing and making. They should work in a range of relevant contexts (for example, the home, school, leisure, culture, enterprise, industry and the wider environment).

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 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

- 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 [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

As part of their work with food, pupils should be 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.

In EYFS children will:

- Children develop their technology skills through the Early Learning Goal objectives.
- They investigate and use construction kits, materials, tools and products. The aim is to develop confidence and physical skills in different contexts.

In KS1 children will:

- Use the basic principles of a healthy and varied diet to prepare dishes.
- Understand where food comes from.

In KS2 children will:

- 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.

Inclusion

Pilgrims' Way Primary school is an inclusive and diverse primary school in the centre of Canterbury, which teaches pupils from the ages of 3-11. We provide an irresistible, broad and balanced curriculum to meet the needs of all our pupils.

The curriculum is designed to make learning relevant and meaningful by embedding context and activating pupil's prior knowledge. Pupils are given opportunities to demonstrate their learning through cultural and personal links. Mainstream Core Standards are used to support all children's access to the curriculum with learning scaffolded to support learners' diverse needs. Teaching opportunities across the curriculum are designed to develop language and literacy so that pupils become fluent in the academic language of the primary curriculum.

We actively liaise with parents to help them support their children's learning.

Cross Curricular Links

Within the curriculum, Design and Technology presents opportunities for cross curricular teaching where links can be made with other subjects. This provides the pupils a chance to apply their learning in other areas and master the skills taught. Where this supports intended learning outcomes, these links will be delivered in a creative and irresistible way.

Health and Safety

Safety is of paramount importance in Design Technology. It is the responsibility of all to ensure equipment is returned and stored correctly and responsibly used by both pupils and staff. Modelling of tools or appliances must be included in lesson planning and is the responsibility of all involved to be aware of safety matters. The teacher is responsible for managing and organising the use of tools, with children adequately supervised and safety standards are maintained. Tools should be checked before use, be age appropriate and any matters reported to the DT subject lead to take action. When working with food, safety and hygiene conditions must be abided by and discussed with pupils before the lesson commences. Child friendly food safety and hygiene posters will be present in food preparation zones to remind and teach children the basic requirements.

Other areas that must be considered when working in Design and Technology lessons include:

- Ensuring working areas are kept clean and tidy.
- Considering storage of partially completed work.
- Ensuring the correct disposal of waste.

Assessment

We use assessment to inform and develop our teaching and recognise the children's progress in the core Design and Technology skills. Within each key area, the development of the core skills (design,

make, evaluate) and technical knowledge is detailed, to ensure that progression is logical, achievable and measurable.

Teachers will assess the progress against the learning objectives for each lesson and through observations of children's practical work. As well as teacher assessments, pupils are encouraged to critique their own and their peers work, encouraging our school values and celebrating each other's progress.

Monitoring and Review:

The Design Technology policy will be reviewed by the DT curriculum leader, supported by the STEM Hub. The DT curriculum leader is responsible for coordinating the DT curriculum following the KAPOW scheme, supporting colleagues with resources and ensuring that a broad and balanced range of skills are taught.

Written: Daniel Chappell (DT Subject Leadership)

Reviewed by: The STEM Hub

Approved: Mrs Campbell (Headteacher)