Fairchildes Primary School

Design and Technology Policy

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Edited By:	Sheron Foster (DT Subject Lead) and Mark Gyford (SLT)
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Introduction

Design and Technology is a subject where children's capability in designing and making is developed by combining it with knowledge and understanding. At Fairchildes, we view Design and Technology as a subject which allows children to apply their knowledge and understanding in a creative way to design and make products.

"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" (National Curriculum Document 2014)

Aims

At Fairchildes we aim to -

- Provide all children with a broad and balanced curriculum which prepares them for life beyond primary education.

- Develop the technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- Encourage children to use their creativity and imagination, to design and make products that solve real and relevant problems
- 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.
- Teach children the language skills they will need to be effective communicators.
- Encourage children to be critical thinkers, forward planners and effective problem solvers.
- Support children to be able to work as capable individuals and as part of a team.
- Encourage children to become innovators and risk takers.

Resilience is a key theme running through our DT curriculum.

Implementation

Through a variety of creative and practical activities, we teach the knowledge, understanding and skills needed to engage in the process of designing and making. The children design and create products that consider function, purpose and user.

When designing and making, the children are taught to:

Design

- Use research and develop design criteria to inform the design of products that are fit for purpose, aimed at particular individuals or groups.
- Generate, develop, model and communicate their ideas through discussion, annotated sketches, prototypes, pattern pieces and computer–aided design.

Make

- Select from and use a wide range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing, as well as chopping and slicing) accurately.
- Select from and use a wide range of materials, ingredients and components, including construction materials, textiles and ingredients, according to their functional properties, aesthetic qualities and, where appropriate, taste.

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
- Understand some of the ways that food can be processed and the effect of different cooking practices (including baking and grilling).

Key skills and knowledge for D and T have been mapped across the school to ensure progression between year groups. The context for the children's work in Design and Technology is also considered and children learn about real life structures and the purpose of specific examples, as well as developing their skills throughout the programme of study. Design and technology lessons are sometimes taught as a block so that children's learning is focused throughout each unit of work.

Teaching and Learning

Units of work have been selected and planned to ensure a balance of materials, skills, knowledge and understanding throughout each Key Stage.
Units of work are planned to include designing and making assignments (DMAs) supported by focused practical tasks or skills teaching (FPTs) and work involving reviewing existing products (IDEAs).
The curriculum is designed to enable progression in Design and Technology processes, including specific aspects of designing and evaluating.
It also ensures that children develop their knowledge and skills systematically; choosing and using an increasing range of tools and techniques to suit a range of different purposes and developing their knowledge and understanding of mechanisms and structures to enable the incorporation of mechanical and electronic systems into their products.
Opportunities will be sought by the school to provide the children with access to places of design and technological significance and learning outside the classroom. The school will also seek to provide access to people with specialist design and technology skills from the local and wider community to enrich the Design and Technology curriculum.

In EYFS the staff team will plan for children to experience creative opportunities and develop key skills and techniques within the EYFS curriculum. There will be a focus on developing fine motor skills and learning how to plan, design and produce the finished project. This information is included on the Whole School Scheme of Work in the Curriculum Folder on Google Drive .
Nursery and Reception classes will be included in whole school projects, workshops, events and competitions associated with Design and Technology, where appropriate.

Planning and Resources

- The school uses 'Projects on a Page' produced by the Design and Technology Association as the basis for planning. These are all available on the shared drive in the curriculum section. Teachers consult these to ensure technical accuracy in their teaching and to inform the programme of study for their year group.
- The specific projects, key skills and knowledge for each Design and Technology Topic have been mapped out for each year group to ensure there is progression from one year to the next.

- To support CPD, the DATA resources also include sketches and diagrams, teaching tips and techniques, suggestions on class organisation, links to resources and a glossary of technical terminology related to specific projects.
- Links have been made to significant designers / jobs who must be discussed as part of the DT project. These are listed on the Curriculum Overview in the Curriculum folder on the shared drive.

Assessment

- Children's knowledge and skills are assessed and developed by the teacher during lessons and through discussion at the end of each unit.
- Teachers use the 'key learning' listed in the 'Projects on a Page' scheme, alongside the progression outlined by the national curriculum, to identify the key knowledge and skills that underpin progress in each unit of work.
- Displays within the classroom and hall areas will reflect a range of work across key stages, to celebrate and exhibit children's varied responses to the design brief.

Inclusion

All children will be supported through differentiation, adaptation or adult support, to enable equal access to learning in Design and Technology

Role of the Subject Leader

- The subject leader will monitor the teaching and learning of the D&T curriculum.
- They will also support and facilitate opportunities that support the continued professional development of teachers in the teaching and learning of D&T.
- The subject leader will maintain a range of good-quality materials and tools, which enable teachers to resource and teach the subject effectively.
- The subject leader will directly support the school's commitment to provide access to places of design and technological significance and learning outside the classroom and provide access to people with specialist design and technology skills from the local and wider community.