



Elburton Primary School

Design and Technology Policy

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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. – Department for Education.

1. Subject Statement

Intent

At Elburton Design and Technology is taught throughout the school and is an inspiring, creative and practical subject where pupils can use their imagination and innovation to research, design, make and evaluate a wide range of products. Children learn to develop their own expression and individuality through taking risks in high quality designs and technological experiences.

As pupils progress through the Design and Technology curriculum, it is our clear intention that all pupils gain more experience accumulating and connecting substantive and disciplinary knowledge.

- **Substantive knowledge** (know what) - this is the subject knowledge and explicit vocabulary used to learn about the content of each unit of work.
- **Disciplinary knowledge** (know how) - their knowledge about *how* designers investigate existing products/ designs and *how* they design and produce their own products. It is through this disciplinary knowledge that pupils will steadily become more expert by thinking like a designer.

The design and technology curriculum at Elburton ensures that children are provided with the opportunities to develop creative, technical and practical expertise that enables them to perform everyday tasks confidently. It also strengthens their ability to build and apply knowledge, understanding and skills to design and make products which they can rigorously evaluate and test.

Units of work are informed by the National Curriculum and are sensitive to children's interests and popular culture. The curriculum at Elburton is planned to ensure that the learning of skills is progressive and builds upon previous knowledge. High quality learning is developed through engagement in **designing, making, and evaluative** activities, alongside appropriate vocabulary and **technical knowledge**.

Implementation

Design and technology is taught in three half termly blocks throughout the academic year and involves a variety of creative and practical activities. These provide many opportunities for the development of the skills, knowledge and understanding needed in the process of

designing and making. The children learn about real life structures and explore specific examples.

Links to other curriculum areas, in particular science and computing, are specifically planned for within the subject mapping. The school's dynamic design and technology curriculum is supported by an extensive range of resources, which are used to support children's exposure and confidence with the range of different aspects of design. Planning is informed by and aligned with the national curriculum. Staff are supported through the access to the additional resources, 'Kapow' and 'Project on a Page'.

Impact

The design and technology curriculum at Elburton contributes to children's creativity, culture and well-being. Children review and evaluate at the start of each lesson to embed and refresh key concepts, this supports the children's pedagogy and empowers them to be confident to make mistakes in their learning, become resourceful, innovative, and enterprising. Completed design projects and evidence of the design journey within books supports this. Through the evaluation of designs, alongside emphasis placed on the development of questioning pupils learn to think more critically, weigh up evidence and develop their own judgements and ideas. This is supported through the creative outcomes and classroom displays which demonstrate the children's achievements.

2. 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, which are planned to include designing and making, supported by skills teaching and work involving reviewing existing products. allowing children to develop their ideas and techniques.

Across the whole school, there are key design concepts that children will explore over the course of their education at Elburton –

Substantive Knowledge (know what):

Substantive knowledge in design and technology is based on the knowledge of four key elements of the process of design: design, make, evaluate and technical knowledge. All of these elements are taught in all year groups.

Design	Know how to design a product that is purposeful, functional and appealing to a specific group.
Make	Know how to safely and carefully cut, join and finish a range of materials, ranging from paper to wood.
Evaluate	Know how to investigate, evaluate and analyse a range of products and their own designs based on specific criteria.

Technical knowledge	Know how to apply their knowledge of materials to meet the criteria above in the design, make and evaluate stages. Use technical vocabulary with confidence and accuracy.
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Disciplinary Knowledge (know how):

Disciplinary knowledge in design and technology is the process of enabling children to use their substantive knowledge of products and materials around them to make links between and across different areas of the curriculum. Knowledge in design and technology will equip the children with the opportunity to explain how and why products have changed over time and how they might be further improved in the future. They can use their knowledge and understanding to suggest how existing products may be improved with the advances in modern technology.

At Elburton teaching and learning in design and technology supported through the access to resources including, 'Kapow' and 'Project on a Page', alongside members of the school community with specialist skills and knowledge.

3. Assessment

Children's learning is continuously assessed by the teacher throughout each unit. The following strategies support teacher assessment:

- Teachers can make judgements about pupil's design and technology skills in relation to the National Curriculum level of attainment based on observations of the children at work.
- Using differentiated questioning techniques to enable children to build upon their initial thoughts and ideas.
- Critical discussion at the end of each unit.
- Using effective feedback to provide children with opportunities for reflection and self-assessment.
- Providing 'Deeper Thinking' tasks to extend and challenge.
- Children are also encouraged to make age appropriate judgements about how they can improve their own work or that of a peer.

Teachers assess termly the learning of individuals and record on Arbour whether the child is Working Below the Expected Standard (WBS), Working Towards the Expected Standard (WTS), Working at the Expected Standard (EXS), or Working at Greater Depth (GDS) in design and technology. This information is shared in the school's annual reports to parents.

4. Planning and Resources

Design and technology is a skills based subject and our curriculum is carefully planned to engage and excite our learners, but also to promote their own development and awareness

of the changing world around them. We use various resources to support the planning and progression of our curriculum. Where possible, incorporating local and national themes to develop an exciting and relevant curriculum. At Elburton, our planning enables children to create designs using tools and equipment in a safe and efficient manner, developing life-long skills.

Design and technology is taught in six to eight week blocks interleaving with Art each term.

Planning format:

- Long term plan: This maps the units covered by each year group, ensuring coverage and progression of design and technology within Elburton.
- Medium term S Plans: These give an overview of a specific unit within the curriculum and show the substantive and disciplinary knowledge, alongside the progression of skills and assessment opportunities.
- Individual lesson plans: Produced weekly through the reviewing and expansion of the medium term S Plans. Evidence of which is accessible through individual lesson flipcharts.

5. EYFS 1 (Nursery) and EYFS 2 (Foundation Stage)

Early years children experience creative opportunities and develop key skills and techniques within the Expressive arts and design section of the EYFS curriculum. There is a focus on developing fine motor skills and learning how to plan, design and produce a finished project. The children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. Pre-school and Foundation classes are (where appropriate) included in whole school projects, workshops, events and competitions associated with Design and Technology.

Children's achievements are recorded on Tapestry, where they can be accessed and collated to assess the progress of each individual pupil.

6. Equal Opportunities and Inclusion

Design and technology is taught to all children, regardless of their ability, social, or academic background. Support for specific individuals is well considered and planned for within Elburton and can include the use of differentiated or adapted materials or additional adults to ensure that identified pupils are making progress and achieving their full potential.

Further consideration is also given to extend those children who require further challenge through the development of greater depth tasks and reflection.

7. The Role of the Subject Leader

The design and technology subject leader's responsibilities:

- To promote the profile of design and technology within the school and wider community.
- To monitor the standard of planning and teaching throughout the school.
- To ensure the inclusion of both substantive and disciplinary knowledge within planning.
- To ensure the curriculum is progressive and that any changes are in line with curriculum requirements.
- To support staff with the effective resourcing of particular units.
- To ensure the design and technology curriculum is accessible to all pupils.
- To keep staff up to date with all subject developments.
- To report on the teaching of design and technology across the school to SLT.