



The Intent, Implementation and Impact of our Design Technology Curriculum

INTENT

The National Curriculum for Design and Technology states that the subject is “inspiring, rigorous and practical”. Therefore, at Dearham Primary school our intent is to offer every child a Design and Technology curriculum which allows them to exercise their creativity through designing and making use of a real-life context for learning.

Children are taught to combine their imagination, creativity, designing and making skills with knowledge and understanding in order to design and make high quality products. Skills are taught progressively to ensure that all children are able to learn and practice in order to develop as they move through the school. Children’s interests are captured through a learning challenge curriculum, ensuring that links are made in a cross curricular way, giving children motivation and meaning for their learning. They are also given opportunities to understand nutrition and learn the basic concepts of home cooking.

IMPLEMENTATION

At Dearham Primary School Design and Technology is taught by following the design, make and evaluate cycle with each stage rooted in technical knowledge and vocabulary. Design and Technology is taught by clear skills and knowledge progression and ensuring that these skills are built on year by year and sequenced appropriately to maximise learning for all children.

We aim to implement this through a variety of teaching methods; Design and technology lessons, developing skills in Art and Design and through a cross curricular approach within other subjects. While drawing on their skills within Mathematics, Art, Science and Computing we aim to deepen their understanding and independence within all these subject areas.

Throughout the school Design and Technology is taught to a high standard with each of the three-stages given equal weight. Evidence of each stage should be provided. This evidence should develop to show clear progression across the key stages as they are passed up through each year group. Initially the design process should be rooted in real life alongside the children’s own creativity and should allow them to take “risks” within relevant contexts to give meaning to learning. While making children are given the freedom to choose from a range of tools and materials.

Finally, during the evaluating stage children should be able to evaluate their products against a design criteria. They should also be given the opportunity to have a more critical approach to their own design and creations. DT is usually taught in short blocks.

Overall, we aim for our children to question and think innovatively about the world around them in order to design and develop their own products with a purpose in mind.

All children have opportunities for:

By the end of Key Stage 1 pupils should:

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 [e.g. levers, sliders, wheels and axles], in their products

Cooking and Nutrition Key Stage 1

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

By the end of Key Stage 2 pupils should:

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
- 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 [e.g. series circuits incorporating switches, bulbs, buzzers and motors]
- Apply their understanding of computing to program, monitor and control their products

Cooking and Nutrition Key Stage 2

- Understand and apply the principles of a healthy and varied diet
- Prepare and cook a variety of predominately 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

Equality of Opportunity Teaching of Design and Technology is in accordance with the present policy for Equal Opportunities. We aim to provide equal access to Design and Technology for those pupils with Special Educational Needs, and for pupils who are more able.

IMPACT

We measure this through:

- teacher assessment
- marking and feedback
- assessment results and result analysis
- formative assessments throughout lessons
- summative assessment at the end of each unit
- anecdotal evidence and evidence from teacher reflective practice

Observations of teaching and learning show:

- engaged learners
- confident children willing to 'have-a-go', showing resilience and self-motivation
- active learning and dialogue between adults and children and between peers
- collaborative learning with opportunities for discussion with peers
- open ended questioning and exploration of objectives
- investigative approaches embedded within lessons
- targeted use of adults in the classroom, including focus groups
- a variety of ways to critically evaluate own and others work
- individual designs that show creativity and imagination