



Design and Technology Policy

Introduction

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 make an essential contribution to the creativity, culture, wealth and well-being of the nation. (The National Curriculum 2014)

This policy reflects how we, at Westgarth Primary School, perceive design and technology. It is a subject in which pupils are given the opportunity to learn about the materials and techniques they use, to become a confident and competent user of design and technology. Every learner has the opportunity to develop and practice their design and technology skills.

Aims for Design and Technology:

- To produce creative work, exploring the children's ideas and recording their experiences
- To develop the creative, technical and practical expertise needed to perform everyday tasks confidently and
- To participate successfully in an increasingly technological world
- To 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
- To critique, evaluate and test their ideas and products and the work of others
- To encourage children to select appropriate tools and investigate different techniques for making a product, whilst following safe procedures
- To begin to understand about the characteristics of different materials and the use of simple mechanisms
- To understand and apply the principles of nutrition and learn how to cook
- To acquire and develop designing and making skills; working with confidence in a stimulating, educational environment.

Teaching and Learning

Here at Westgarth Primary School, we value the importance of teaching design and technology through a curriculum that enables children to explore creativity, exercise their resilience and use critical thinking to solve everyday problems.

How we teach:

- We follow the five core DT skills and principles of Westgarth School; skills are revisited each year as pupils gain increasing mastery and confidence under these five areas;
 1. Design criteria
 2. Research and explore
 3. Design and plan
 4. Make
 5. Evaluate
- Our medium-term plans, which we have adopted from the curriculum progression of skills, give details of each unit of work for each term. These plans define what we will teach and ensure an appropriate balance of each discipline and knowledge across each year group. Our design and technology subject leader work this out in conjunction with teaching colleagues in each year group.
- We teach through a mixture of whole-class teaching and individual/group activities.
- Use a range of materials and visits in our local areas.
- We make sure resources are suitable for all abilities and adaptive for individual needs.
- For children to see that their work is valued, celebrated and displayed around the school.
- Each year at Christmas, the children take part in an enterprise task across the school, developing and creating a product to sell at Westgarth Christmas Markets.

Curriculum

Key Stage 1

Pupils should be taught:

- 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
- 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
- Explore and evaluate a range of existing products

- Evaluate their ideas and products against design criteria
- 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.
- Use the basic principles of a healthy and varied diet to prepare dishes
- Understand where food comes from.

Key stage 2

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.
- To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.
- 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.
- 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.
- apply their understanding of how to strengthen, stiffen and reinforce more complex structures.
- Understand and use mechanical systems and electrical systems in their products.
- Apply their understanding of computing to program, monitor and control their products.
- To understand and apply the principles of a healthy diet. Prepare and cook a variety of savoury dishes.
- To understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

Early Years Foundation Stage

Design and Technology is an integral element of learning within EYFS at Westgarth. Children learn essential problem-solving skills through working independently, and as part of a team, in structured provision areas. Children have the opportunity to construct models using a choice of tools, such as: scissors; glue; string; elastic bands and cardboard. Our 'Creative Zone' offers an environment that allows children engage in cross-curricular learning and create products that have a meaning and purpose. Children learn the essential skills required for

cooking and food preparation by creating healthy drinks and snacks using seasonal produce. At all stages of learning, children have the opportunity to discuss their ideas, give feedback on their work and record their experiences by drawing and writing.

Assessment

Assessment in design and technology is monitored by teachers assessing children's work as they observe them working during lessons, considering both the quality of the products they make, as well as the skills they exhibit as they use tools, materials and processes.

Assessments are used over time to monitor and evaluate the essential knowledge, understanding and skills that all pupils should learn. Children are given the opportunity to assess and reflect upon their own learning throughout the design and technology process.

Design and Technology Cross Curricular Links

Wherever appropriate, DT is linked to other areas of the curriculum and gives children the opportunities to develop specific art skills and reinforces skills already established. While there are opportunities for children of all abilities to develop their skills and knowledge in each unit, the progression planned into the scheme of work means that the children are increasingly challenged as they move through the school.

- Art: Children use art in their design process and aids their ideas.
- Maths: D&T often requires the use of mathematical skills from number work to patterns, and in particular handling data.
- English: The children explain their designs orally or on paper and later, the evaluation of their products requires children to articulate their ideas and to compare and contrast their views with those of other people.
- Computing: D&T and computing share many curricular links, especially when looking at electronic systems. Computing can be used to enhance teaching and learning in D&T.
- Science: Many areas provide opportunities for children to use and develop scientific knowledge, such as working with electrical circuits and switches, and working with food products related to healthy eating.
- PSHE: We encourage the children to develop a sense of responsibility in following safe procedures when making things. They also learn about health and healthy diets.

Spiritual, Moral, Social and Cultural Development

The teaching of Design and Technology offers opportunities to support the social development of our children through the way we expect them to work with each other in lessons. The structure of D&T lessons allow children to work together, and give them the chance to discuss their ideas and feelings about their own work and the work of others. Through their collaborative and co-operative work across a range of activities and experiences in Design and Technology, the children develop respect for the abilities of other children and a better understanding of themselves. They also develop a respect for the environment, for their own health and safety and for that of others. They develop their cultural awareness and understanding, including the contribution that people from other cultures have made to the design and technology industry. They learn to appreciate the value of differences and similarities. A variety of experiences teaches them to appreciate that all people are equally important, and that the needs of individuals are not the same as the needs of groups.

Resources

Our school has a wide range of resources to support the teaching of Design and Technology across the school. Classrooms have a range of basic resources, with the more specialised equipment being kept in the Design and Technology cupboards in both KS1 and KS2. Audits will be carried out regularly by the D&T coordinator to monitor the resources, any shortfalls should be reported to the coordinator who will arrange for replenishment. The KS2 cupboard contains a lot of the schools D&T equipment and is not accessible to children.

Equal Opportunities

Activities should be carefully planned by the class teacher and be differentiated where appropriate for children with SEN and equally the more able and Gifted and Talented children. All resources/materials have been reviewed with equal opportunities in mind, e.g. race, gender, ethnicity. Learning experiences in design and technology will be available to every child, regardless of race, gender, class or ability. Pupils will be encouraged to value social and cultural diversity through their experiences. They will participate in a variety of experiences in a positive and constructive role.

Community Links and Events at Westgarth Primary School

Where possible we plan to the local circumstances of our school such as when we use the local environment as the starting point for aspects of our work. We also look into how pupils can work in a range of other relevant contexts, such as the home and school, gardens and playgrounds, the local community, industry and the wider environment. The children are able to share their design and technology creations, particularly in the autumn term during our Westgarth Christmas Market, where the children are able to sell their products to their families and local community. As a school, we also participate in the local village Scarecrow Festival each year, creating a themed scarecrow to display outside our school and this becomes part of the festival map.

Role of the class teacher

- To ensure progression in the acquisition of each skill with due regard to the National Curriculum for design and technology.
- To develop and update skills, knowledge and understanding of D&T.
- To take advantage of training opportunities.
- To keep appropriate on-going records.

Role of the subject lead

The subject lead is responsible for coordinating art throughout the school.

This includes:

- Ensuring that statutory requirements within the National Curriculum for D&T and assessment are met.
- Fostering cross-curricular links through the skills-based curriculum throughout school.
- Ensuring continuity and progression from year group to year group through monitoring planning and work completed.
- Advising on training needed and booking staff on appropriate courses.
- Assisting with buying and maintaining resources within the yearly budget.
- Assisting and supporting colleagues in the implementation and assessment of D&T throughout the school.
- Evaluating the strength and weaknesses in the subject, indicating areas for further development and improvement. This is recorded in the School Development Plan.

➤ **Signed:** Mrs A Barnes

Date: September 2024