Longshaw Junior School

Success for all - Nothing Less!

Design and Technology Policy

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.

Curriculum aims

This area of learning contributes to the achievement of the curriculum aims for all young people to become:

- Successful learners who enjoy learning, make progress and achieve.
- Confident individuals who are able to live safe, healthy and fulfilling lives.
- Responsible citizens who make a positive contribution to society.

The national curriculum for design and technology aims to ensure that all pupils:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
- 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
- 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.

Planning

Design and Technology is a foundation subject in the National Curriculum. At Longshaw Junior Community School we use the National Curriculum 2014 for design and technology as the basis for its long term planning. The new National Curriculum requirements are consistent with the **six** principles:

- **User-** Pupils should have a clear idea of who they are designing and making products for, considering their needs, wants, values, interests and preferences. The intended users could be themselves or others, an imaginary or story-based character, a client, a consumer or specific target group.
- **Purpose -**Pupils should be able to clearly communicate the purpose of the products they are designing and making. Each product they create should be designed to perform one or more defined tasks. Pupils' products should be evaluated through use.
- **Functionality -**Pupils should design and make products that work/function effectively in order to fulfil users' needs, wants and purposes.
- **Design Decisions -**Pupils need opportunities to make their own design decisions. Making design decisions allows pupils to demonstrate their creative, technical and practical expertise, and draw on learning from other subjects. Through making design decisions pupils decide on the form their product will take, how their product will work, what task or tasks it will perform and who the product will be for.

- **Innovation -**When designing and making, pupils need some scope to be original with their thinking. Projects that encourage innovation lead to a range of design ideas and products being developed and are characterised by engaging open-ended starting points for learning.
- **Authenticity -**Pupils should design and make products that are believable, real and meaningful to themselves and others.

DT Scheme of Work
Teachers are provided with substansive and disciplinary knowledge progression map outlining the key knowledge and skills that are to be acquired during the year group. Each year group will be given useful resources and approaches to assist in the teaching of the subject. The scheme of work is intended to be working documents and are continually in development.

Teaching
At Longshaw Junior Community School, teachers plan their DT lessons using the school's curriculum planning formats. DT is planned as a discrete subject. Class teachers complete a short term plan for each Design and Technology lesson, identifying the specific learning objectives and success criteria for each lesson.
We recognise the fact that we have children of differing ability in all our classes, and so we provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child.

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.
The children will be taught to:
- 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.

The children are taught the principles of food hygiene and safe practice in food preparation.

Health & Safety
Health & Safety is paramount across all phases. Children are taught to use tools and equipment safely at a level appropriate to their age and development. Sharp knives and saws will be stored safely and away from children.

<u>Contribution of DT to teaching in other curriculum areas</u>
English
Design and Technology contributes to the teaching of English in our school. The evaluation of products requires children to articulate their ideas and to compare and contrast their views with those of other people. Through discussion children learn to justify their own views and clarify their design ideas.

Mathematics
In Design and Technology there are many opportunities for children to apply their mathematical skills through choosing and using appropriate ways of calculating measurements and distances. They learn

how to check the results of calculations for reasonableness, and learn how to use an appropriate degree of accuracy for different contexts. Children learn to measure and use equipment correctly. They apply their knowledge of fractions and percentages to describe quantities and calculate proportions. The children will carry out investigations and in doing so they will learn to read and interpret scales, collect and present data, and draw their own conclusions. They will learn about size and shape, and make practical use
of their mathematical knowledge, in order to be creative and practical in their designs and modeling.

Computing
Information and communication technology enhances the teaching of Design and Technology, wherever appropriate, throughout the school. Children use software to enhance their skills in designing and making things. The children can also use ICT to collect information and to present their designs through a range of design and presentation software.

Personal, social and health education & citizenship
Design and Technology contributes to the teaching of personal, social and health education & citizenship. 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. Their work encourages them to be responsible and to set targets to meet deadlines, and they also learn, through their understanding of personal hygiene, how to prevent disease from spreading when working with food.

History
History links with DT well. Children learn to understand how key events and individuals in design and technology have helped shaped the world. For example, in year 5 the children are taught about some important inventions from the Industrial Revolution.

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. Within Design and Technology, children have the chance to practice some of our school values such as **Teamwork, Determination** and **Respect**. Children have the opportunity to work together, and have the chance to discuss their ideas and feelings about their own work and the work of others. Through their collaborative and cooperative 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.

Teaching Design and Technology and inclusion
At Longshaw Junior School, we teach Design and Technology to all children, whatever their ability and individual needs. Design and Technology implements the school curriculum policy of providing a broad and balanced education to all children. Through our Design and Technology teaching we provide learning opportunities that enable all pupils to make good progress. We strive hard to meet the needs of those pupils with special educational needs, those with disabilities, those with special gifts and talents, and those learning English as an additional language, and we take all reasonable steps to achieve this.

Assessment and recording
We assess the children's work in Design and Technology whilst observing them working during lessons. Teachers use Sonar to track the children's progress.

Resources

We have a wide range of resources to support the teaching of Design and Technology across the school. All our classrooms have a range of basic resources (e.g. scissors, rulers, pencils etc.), but the majority of the equipment and materials are held centrally in the Design and Technology store at the end of the Year 6 corridor. There are also a large number of computers in the school to aid the teaching of CAD computer-aided design.

The role of the Design and Technology coordinator

The role of the Design and Technology coordinator is to:

- inspire an enthusiasm for the subject and advise staff when necessary;
- ensure continuity of progression in work across the key stage and coverage of the National Curriculum;
- write and evaluate an annual action plan;
- monitor the schemes of work to ensure progression and continuity in Design and Technology throughout the school;
- act in an advisory capacity and encourage "good practice";
- manage a budget and the ordering and maintaining all art materials used in school in consultation with other members of staff;
- develop a common approach to assessment of the subject;
- liaise with infant and secondary schools as necessary; and
- take the lead in policy development and update the policy when required.