



Design & Technology Policy

Policy Owner	Mrs A Humphries
Date Approved	7.10.21
Governor Signature	
Governor Name	Mr S Hill
Governor Role	Chair

<u>Admin use only</u>	
Location	
Website	
Learning Platform	
Policies File	
Staff room	
Headteacher's File	
Policies Log updated	





This policy describes the current provision for Design and Technology at Loxdale Primary School, as defined in the National Curriculum 2013. This policy will illustrate the aims, entitlement, planning, management, assessment, and health and safety of Design and Technology within school.

1. Rationale

Technology gives the children the opportunity to develop the knowledge, skills and understanding necessary to design, make and evaluate products fit for a purpose and the practical skills to work with a wide range of materials and components. They develop an understanding of control systems, energy and structures and an awareness of the impact of technology and its contribution to the quality of life.

2. Aims and objectives

Loxdale Primary fully supports the National Curriculum by providing opportunities for its pupils to:

- 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.

At Key stage 1, our pupils will be taught:

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 [for example, levers, sliders, wheels and axles], in their products.



At Key stage 2, our pupils will be taught:

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 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 [for example, gears, pulleys, cams, levers and linkages]
- understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
- apply their understanding of computing to program, monitor and control their products.

3. Teaching and Learning Style

The school uses a variety of teaching and learning styles in Design and Technology lessons. Loxdale's principal aim is to develop the children's knowledge, skills and understanding. Staff ensure that the act of investigating and making something includes exploring and developing ideas, and evaluating and developing work. This is taught best through a mixture of whole-class teaching and individual or group activities. Teachers draw attention to good examples of individual performance as models for the other children. They encourage children to evaluate their own ideas and methods, and the work of others, and to say what they think and feel about them. We give children the opportunity to work, by themselves and in collaboration with others, on projects in two and three dimensions, and at different scales. Children also have the opportunity to use a wide range of materials and resources, including computer technology.



Staff recognise the fact that Loxdale has children of differing ability in all classes, and thus provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child. This is achieved through a range of strategies:

- Setting tasks that are open-ended and can have a variety of responses;
- Setting tasks of increasing difficulty, where not all children complete all tasks;
- Grouping children by ability, and setting different tasks for each group;
- Providing a range of challenges with different resources;
- Having more adults support the work of individual children or small groups;
- Providing specialist support where individual children have particular gifts or talents.

4. Design and Technology Planning

Staff are provided with a Theme Overview (long term plan), which outlines the coverage of the foundation subjects covered from Years 1 to 6. The Curriculum Overview (Medium term plan) outlines the full curriculum coverage of the theme linked to the National Curriculum objectives. It includes 'skills, this is what the children will be expected to know and have learnt by the end of the unit; plus ideas for 'final outcomes' and 'research opportunities'. Staff are encouraged to be flexible by selecting sessions tailored to the needs of their children - teaching the topic as a 'block' of work or reducing it to half a term if they wish.

6. Foundation Stage

During the Early Years Foundation Stage, the essential building blocks of children's design and technology capability are established. There are many opportunities for carrying out D&T-related activities in all areas of learning in the EYFS. Specifically, 'Designing and Making' is identified as a strand within Knowledge and Understanding of the World. By the end of the EYFS, most children should be able to:

- Construct with a purpose in mind, using a variety of resources
- Use simple tools and techniques competently and appropriately
- Build and construct with a wide range of objects, selecting appropriate resources and adapting their work when necessary
- Select the tools and techniques they need to shape, assemble and join materials they are using

D&T-related activities in the EYFS should be appropriate to the developmental stage of the children. Activities should look quite different from those carried out in KS1. Effective practice in the EYFS has the following characteristics:

- Designing does not necessarily entail drawing
- Designing can mean using hand gestures, arranging and re-arranging materials and components, talking and listening
- Designing is usually intuitive
- The designing and making process is fluid
- Sometimes practical skills are taught directly



- Children have frequent opportunities to develop practical skills with a range of materials
- Children have frequent opportunities to explore construction kits
- Children have frequent opportunities to explore existing products
- Activities are appropriate to children's prior experience
- Context is sometimes set by teacher, sometimes by the children

7. Cross Curricular Links

Design and Technology activities are linked to a variety of subjects within the curriculum. The children are engaged in problem solving activities to design, model and make products. Pupils have the opportunity to research existing products, materials and techniques in order to create their own ideas.

8. Design and Technology and Inclusion

At Loxdale, all pupils are taught Design and Technology, whatever their ability and individual needs. Design and Technology forms part of the school's curriculum policy that provides a broad and balanced education for all pupils. Teachers provide learning opportunities that are matched to the needs of children. Staff strive to meet the needs of all pupils with special educational needs, disabilities, special gifts and talents, and of those learning English as an additional language. The curriculum enables all pupils to have access to the full range of activities while studying Design and Technology.

9. Assessment

Pupils' progress is assessed and monitored through the children's work in Design and Technology, while observing them working during lessons. Teachers record the progress made by children against the pupil's targets which are taken from the Progression document. The pupil's progress is measured and monitored via the use of Design and Technology targets, which have been taken directly from the Progression document, which fully supports the National Curriculum. Children are encouraged to assess and evaluate both their own work and that of other pupils. This helps them to appreciate how they can improve their performance, and what their targets should be for the future. This method of recording enables the teacher to make on going assessments to ensure at least good progress is made. An annual assessment of attainment for each child is recorded at the end of each academic year which is shared with parents and carers via pupil reports. This information is also passed on the next teacher at the end of each year.

10. Resources

Loxdale Primary has a range of resources to support the teaching of Design and Technology across the school. We keep more specialised equipment in the Salter Suite for ease of access. These resources are accessible to children under adult supervision. A resource audit is carried out periodically to ensure that resources are kept up to date and are available to fully support teaching and learning.



11. Health and Safety

At all times, children will be taught how to care for and handle equipment safely and with respect. When working with tools, equipment and materials, in practical and in different environments, including those that are unfamiliar, pupils will be taught:

- About hazards, risks and risk control;
- To recognize hazards, assess consequent risks and take steps to control the risks to themselves and others;
- To use information to assess the immediate and cumulative risks;
- To manage their environment to ensure the health and safety of themselves and others;
- To explain the steps they take to control risk.

Staff should be aware of the County guidance on Health and Safety, manufacturers advise on the products they use and other information circulated.

12. Monitoring and Review

The quality of teaching and learning in Art and Design is monitored and evaluated by the Senior Leadership Team and the subject coordinator as part of the school's agreed cycle of lesson observations. The Art and Design policy should be reviewed every two years.

Signed: _____

Date: _____

Chair of Governors

Signed: _____

Date: _____

Link Governor

Review Date: September 2022