



Work Together, Learn Together, Grow Together

Langdale Primary School Design Technology Policy

Updated in September 2020 by L.Quick

At Langdale Primary we value Design Technology as it provides an opportunity to teach children maths, English and other subjects in a fun and practical way. It provides a stimulating context for these subjects making them more applicable and therefore easier to understand. It provides children with the opportunity to make decisions for themselves or as a team and to learn how to think critically. We believe that design is embedded within history as a basis to explore how design has helped to shape the world in which we live in today. It also provides children with excellent life skills that they will use throughout their lives such as cooking.

This document is a statement of the aims, principles, strategies and resources for the teaching of design technology at Langdale.

Aims

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

The national curriculum states that the key process for design technology are as follows:

Key stage 1

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They

should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment].

When designing and making, pupils should be taught to:

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

Key stage 2

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

When designing and making, pupils should be taught to:

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

Planning & assessment of design sessions at Langdale Primary School

- We plan design sessions based on the new National Curriculum objectives.
- Assessment of design at Langdale is based on a progression of objectives & skills.
- Each term, children will be given the opportunity to design, make and evaluate a project.
- Each year, children will have the opportunity to use a range of different resources.

What does Design look like at Langdale?

All teachers at Langdale are involved with the teaching of design. Design is taught explicitly, with children designing, making and evaluating projects once a term, which is recorded in an art and design sketchbook. Children through design will identify problems, plan, make and evaluate products that will meet the needs identified at the start of the process. Through this we aim for children to become critical thinkers and creative problems solvers, individually and as a team. Design provides a context in which children have the opportunity to apply skills that they have learnt in other lessons. Children will create and evaluate one design project per half term, this will be recorded and evaluated in their art and design sketchbooks.

Design is also taught discreetly throughout the curriculum lessons, children learn about different designers and aspects of design in history, it is important that children know how design contributes, shapes and reflects our history. Children learn about different aspects of design and how they have evolved with the changing needs of society. Design and technology contributes to the teaching of personal, social and health education. Children will develop responsibility and autonomy, following important safety procedures when making new products. Children will learn about healthy eating through design and the important life skills of cooking. Through this children will learn about personal hygiene and how to work safely with food.

Safety in D and T

It is important to take into account children's safety during DT lessons as we aim to provide the children with opportunities to use different tools safely. The class teacher is responsible for the safety of children. When using the cooking equipment children must always follow the correct procedures for food hygiene and safety. Children need to be made aware of these procedures before the lesson begins. All staff working with the children need to be made aware of the safety procedures for each lesson. When using cutting equipment children need to be closely monitored by adults.

Principles we adhere to:

- That enough time is given over to introducing the work, discussion and evaluation.
- That importance and status is given to the work.
- That, whenever possible, first hand, worthwhile experience is offered.
- Where secondary resource materials are used, a critical awareness of the limitations of copying is encouraged. .
- If appropriate, a stimulating display of photographs, artwork, posters, books, artefacts etc. is mounted as a reference to the project.
- Previous knowledge is built upon.
- Tasks are simplified – that we plan for progressive introduction of more complex skills, vocabulary etc. as work progresses.
- If appropriate, we work through a process of familiarisation with new materials and techniques.
- We encourage correct use of materials and tools – rulers, compass etc.
- We allow children access to a wide variety of materials.
- We encourage children to make informed choices of materials, equipment, scale, mounting etc. and to exhibit work whenever possible.
- We encourage self and group evaluation of work: What went wrong? What went right?
- We allow the opportunity for the study and appreciation of designers and works from a variety of cultures and traditions.
- We plan work in conjunction with learning in other areas of the curriculum.
- Health & safety aspects are considered before using new mediums.
- We celebrate designs children have created through community afternoons, parent exhibitions within schools and photographs of the children's work.

Learning environment

- Resources are available and used to support children's understanding of new concepts (key vocabulary, books, posters etc.)
- Tangible resources are in the classroom that are linked to class topics and that act as inspiration to initiate design projects.
- Displays highlight the value and importance of design in learning.