



Leominster Primary School

Design Technology Policy

At Leominster Primary School, we aim to add a practical learning experience through Design and Technology. In line with the *National Curriculum - Programmes of Study*, we aim to teach a progressive range of skills, thereby developing a sound knowledge of the application of materials, tools and techniques. Issues of safety are an intrinsic part of the teaching of this subject.

Design & Technology and the National Curriculum

Design and Technology is taught in line with the National Curriculum Programmes of Study (DfE September 2013).

“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 to take risks, becoming resourceful, innovative, enterprising and capable citizens.”

Knowledge, skills and understanding

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. When designing and making, pupils should be taught to:

Key Stage 1

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

Key Stage 2

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

“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 greatest 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 later in life.” (DfE September 2013)

Cooking and Nutrition

Key Stage 1

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

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.

Approaches to teaching and learning

Design and Technology is taught by the class teacher or lead teacher within the year group, as a project, which can be linked to year Topics. Emphasis is placed on developing the Focussed Practical Task (teaching of skills) in each of the projects, thereby allowing children to acquire a sound understanding of the tools, equipment, materials and components to make quality products. By creating opportunities within the project themes to design, make, evaluate and develop technical knowledge, we aim to give children greater understanding of the subject. 'Cooking and Nutrition' can be taught within classes (using their wet/practical areas) and also within the School's modern kitchen. Written work is recorded within Topic books. Teachers are encouraged to keep photographic evidence of practical activities/tasks, which are then kept within their Topic books.

Scheme of Work

Our Scheme of Work sets out the progressive range of knowledge, skills and understanding across the range of Design and Technology elements, and ensure continuity and progression throughout the school.

Cross curricular links

There are links within a number of subjects, including Art and Design, Science, English, Mathematics, Computing and History.

Assessment and Marking

Children will be continually assessed with Design and Technology against each of the Skills, through both written and verbal responses. Teachers are also encouraged to keep electronic evidence (photographic). At the end of each topic, a judgement will be made based on their overall understanding and how many of the objectives they have achieved. Either 'secure' understanding; 'within' understanding or 'entering' understanding. Teachers will track children's progress on class objective sheets. These will then be passed on to the children's next class teacher at the end of the academic year and be given to the subject coordinators.

Marking within Design and Technology will be given verbally throughout the process with a written whole topic assessment indicating whether the objective/s has been met (LO met) at the end of the topic. If not met development questions to be given if appropriate to aid further understanding.

Parental support

The school values the support of parents in this area of the curriculum, which encourages them to help with practical activities, where appropriate. Extra-Curricular Clubs are sometimes led by parents (dependent on an enhanced DBS check).

Resources

Design & Technology (and Science) resources are kept in a locked cupboard on the middle floor. Teachers have full access to this cupboard via the key holders (Science Coordinator, HR & SBP). Ordering of resources and equipment is generally undertaken by the

coordinator or year groups.

Staff Development

The coordinator provides information, training and support through staff meetings and individual year meetings. There are opportunities for further staff training for professional development through external course providers.

Monitoring and Evaluation

The coordinator monitors Design & Technology projects throughout the school. Year groups are encouraged to display work, in order to value children's' work as well as for teachers to become aware of other year group projects.

Management of D&T

D & T 'Progression of Skills' has been devised by the Coordinator, with discussion from teachers. Planning of the D & T curriculum has been undertaken by individual year teams in consultation with the subject coordinator. The D & T coordinator is responsible for the overall planning, continuity and monitoring of the subject. All teachers are responsible for organisation and delivery of D & T within their classes.

Health and Safety

In order to maintain stringent health and safety standards, a risk assessment should be carried out for every lesson where there are potential hazards from the activity, materials, methods of work or equipment. The risk assessment must be filled out and given to the headteacher for approval prior to the lesson.

Before undertaking practical tasks, children should be taught to use tools correctly in order to ensure safety. The following publications provide valuable additional guidance for staff. 'Make it Safe' 5th edition, 2001 'The National Association of Advisers and Inspectors in Design and Technology.'

If teachers have any concerns about Health and Safety issues, refer to the coordinator/Head Teacher.

Staff Responsible: Mrs. R. Styles (KS2) & Mrs J Kebble (KS1)

Date Last Review: Summer 2019

Date of Next Review: Summer 2021

