

# Design and Technology Policy for Lacewood Primary School



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## A Statement of Policy for the Design and Technology Curriculum

All aspects of our key principles at Lacewood Primary School underpin our curriculum, which promotes our school motto and ethos of always trying your best to be your best. Our curriculum is led by our whole school core principles of developing every child's learning characteristics, in line with our school learning buddy approach, of:

Co-operation and independence, (bee)

Thinking skills and problem solving, (owl)

Effort, resilience and commitment, (snail)

Collecting ideas and making links in their learning, (squirrel)

### Intent

At Lacewood Primary, we value and are committed to the teaching of Design and Technology to give children the skills to design, create and problem solve. Our curriculum is designed to provide, through inspiring and engaging experiences, the knowledge and skills to become independent, life-long learners.

We believe that design and technology should inspire creativity and imagination, enabling pupils to design and make products which solve real and relevant problems within a variety of contexts. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens.

The DT curriculum has been produced using the *Kapow* Scheme of learning for DT and is designed to encourage pupils to learn to think and intervene creatively to solve problems both as individuals and as members of a team. We pro-actively explain, demonstrate and enforce the health, hygiene and safety aspects involved in food preparation and tool use so that the children carry these forward in their lives.

To ensure maximum progression and repeated coverage of knowledge, vocabulary and skills, we build upon areas of knowledge to embed this into the long-term memory. For this reason, our Design and Technology curriculum is built around 5 'Golden Threads' which ensure learning is organised into areas which provide coherence throughout the curriculum and support children in building knowledge and making learning stick for all learners – including those with Special Educational Needs (SEN).

<b>Textiles</b>
<b>Structures</b>
<b>Mechanisms</b>
<b>Electrical Systems (KS2)</b>
<b>*Food</b>

Through the Design and Technology curriculum, we believe that children should be inspired by, and encouraged to become, the engineers, designers, chefs and architects of the future.

## Aims and Objectives of Design & Technology

We believe that every child - including those with SEN - can engage with and participate in design and technology with the right kind of teaching and support. At Lacewood Primary School we have high expectations to enable excellence for all and we base our teaching on the belief that all children have the potential to succeed.

Lacewood Primary School aim to develop learners who:

- Develop the creative, technical, and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technical world.
- Build and apply knowledge, understanding and skills in order to design and make high-quality products for a wide range of users.
- Critique, evaluate and test ideas and products.
- Utilise skills and knowledge gained from other subjects when making their product, such as measuring, communication and drawing skills,
- Know the safe and effective use of a range of tools, materials and components,
- Have an indepth understanding of the ways in which people have designed products in the past and present to meet their needs,
- Have a Growth Mindset and a positive 'can-do' attitude towards the subject of design and technology and develop their own creativity and innovation through designing and making,
- Develop an understanding of technological processes, their management and their contribution to society.

## Implementation of the Design & Technology Curriculum

At Lacewood, staff plan a structure and sequence of lessons using our Design Technology scheme of work. This coherently planned sequence of lessons ensures children develop a clear understanding of the knowledge, vocabulary and skills detailed in our long term progression document; required to meet the aims of the national curriculum. All teaching of DT follows the design, make and evaluate cycle and the stages are given equal weight. Each of the stages are rooted in technical knowledge and vocabulary. Using the long term progression document and medium term overview, class teachers prepare:

- A knowledge organiser, which outlines knowledge (including key vocabulary) children must master.
- A sequence of lessons, which are coherently planned to aid progression and depth of knowledge.
- Trips and visiting experts to support and enhance learning.
- Displays to celebrate children's learning.

The foundations of each stage are technical knowledge and the practise of skills. The design process has real life, relevant contexts to give meaning to learning. While making, children are given the opportunity to use a range of tools, from which they can freely choose. Children evaluate their own products against design criteria. Evidence for these stages can be found in children's DT folders, which develops to show clear progression across the key stages.

## Design & Technology in relation to the National Curriculum

**During the key stage, pupils should be taught the knowledge, skills and understanding through:**

- a) investigating and evaluating a range of familiar products [for example, talking about how they work, and whether they do what they are supposed to do]
- b) focused practical tasks that develop a range of techniques, skills, processes and knowledge
- c) design and make assignments using a range of materials, including food, items that can be put together to make products, and textiles

### **Progression in design and technology at Foundation, Key Stages 1 and 2**

The following expectations are set out in Maintaining breadth and balance at key stages 1 and 2.

**Throughout Foundation and by the end of key stage 1:**

#### 1. Developing, planning and communicating ideas

Pupils should be taught to:

- a) generate ideas by drawing on their own and other people's experiences,
- b) develop ideas by shaping materials and putting together components,
- c) talk about their ideas,
- d) plan by suggesting what to do next as their ideas develop,
- e) communicate their ideas using a variety of methods, including drawing and making models.



#### 2. Working with tools, equipment, materials and components to make quality products.

Pupils should be taught to:

- a) select tools, techniques and materials for making their product from a range suggested by the teacher,
- b) explore the sensory qualities of materials,
- c) measure, mark out, cut and shape a range of materials,
- d) assemble, join and combine materials and components,
- e) use simple finishing techniques to improve the appearance of their product, using a range of equipment,
- f) follow safe procedures for food safety and hygiene.

#### 3. Evaluating processes and products

Pupils should be taught to:

- a) talk about their ideas, saying what they like and dislike,
- b) identify what they could have done differently or how they could improve their work in the future.

#### 4. Knowledge and understanding of materials and components

Pupils should be taught:

- a) about the working characteristics of materials [for example, folding paper to make it stiffer, plaiting yarn to make it stronger]
- b) how mechanisms can be used in different ways [for example, wheels and axles, joints that allow movement]

## By the end of key stage 2,

### 1. Developing, planning and communicating ideas

Pupils should be taught to:

- a) generate ideas for products after thinking about who will use them and what they will be used for, using information from a number of sources, including ICT-based sources,
- b) develop ideas and explain them clearly, putting together a list of what they want their design to achieve,
- c) plan what they have to do, suggesting a sequence of actions and alternatives, if needed,
- d) communicate design ideas in different ways as they develop, bearing in mind aesthetic qualities and the uses and purposes for which the product is intended.

### 2. Working with tools, equipment, materials and components to make quality products

Pupils should be taught to:

- a) select appropriate tools and techniques for making their product,
- b) suggest alternative ways of making their product, if first attempts fail,
- c) explore the sensory qualities of materials and how to use materials and processes,
- d) measure, mark out, cut and shape a range of materials, and assemble, join and combine components and materials accurately,
- e) follow safe procedures for food safety and hygiene.

### 3. Evaluating processes and products

Pupils should be taught to:

- a) reflect on the progress of their work as they design and make, identifying ways they could improve their products,
- b) carry out appropriate tests before making any improvements,
- c) recognise that the quality of a product depends on how well it is made and how well it meets its intended purpose, [for example, how well products meet social, economic and environmental considerations].

### 4. Knowledge and understanding of materials and components

Pupils should be taught:

- a) how the working characteristics of materials affect the ways they are used
- b) how materials can be combined and mixed to create more useful properties, [for example, using cardboard triangles on the corners of a wooden framework to strengthen it]
- c) how mechanisms can be used to make things move in different ways, using a range of equipment including an ICT control programme,
- d) how electrical circuits, including those with simple switches, can be used to achieve results that work.

## Relationship to other Subjects

Design & Technology is taught as a subject specific activity through a combination of whole class teaching, group work and individual work. Cross-curricular links are detailed on the long-term planning sheets.

## Equal Opportunities and Special Needs

Teachers ensure that pupils have access to the range of Design & Technology activities and use opportunities within Design & Technology to challenge stereotypes.

Pupils are encouraged and supported to develop their Design & Technology capability using a range of materials. In DT activities the differentiation is mainly by outcome, though in cases where pupils have special educational needs, there may be the need to differentiate by task in order to cater for children's diverse learning needs; detailed in the DT leader's SEN provision for subject leads document.

### **Food - Hygiene and Safety**

Perishable food is bought and/or brought in and used on the day it is needed. Non-perishable food (e.g. some dry foodstuffs) may be safely stored for future use, providing the 'Use by Dates' are still relevant at the time of use. Disposal of stored items of food is the responsibility of the class teacher. Teachers and adult support staff will oversee that cupboards, table tops, cooker etc. are clean and in working order.

### **Assessment and Recording Progress - Impact**

Progress in Design and Technology is demonstrated through regularly reviewing and scrutinising children's work to ensure that progression of skills is taking place. Namely through:

- Looking at pupils' work, especially over time as they gain skills and knowledge
- Observing how they perform in lessons
- Talking to them about what they know
- Keeping a record of where children in each cohort are at the end of each unit of work, according to the golden threads and tracking their progress towards the golden threads over the academic year.
- Passing on relevant tracking information to the following teachers to support their planning for the following academic year.

The Design and Technology curriculum will contribute to children's personal development in creativity, independence, judgement and self-reflection. This will be seen in them being able to talk confidently about their work, using a widening range of technical vocabulary and oracy skills, and sharing their work with others.

Progress will be shown through outcomes and through the important record of the process leading to them.

### **Resource Management**

The school

- is committed to reviewing the position and use of technology resources,
- will ensure the efficient deployment of existing resources,
- is committed to updating and renewing their replacement when necessary and funds are available, considering further purchasing to meet future needs.

Role of the subject leader

- Lead the development of design and technology on the school,
- Provide guidance to individual members of staff,
- Keep up to date with local and national developments in design and technology and disseminate relevant information,
- Update staff on new tools, materials etc.
- Review and monitor the success and progress of the planned units if work.

Role of the teacher

- To be enthusiastic about Design and technology and demonstrate good practise.
- To review and organise design and technology resources and order additional materials to be able to teach units in the long term plan.

- To add examples of children's work to a portfolio and the electronic portfolio kept on the school server.

#### Role of the Head Teacher

- To lead manage and monitor the implementation of the national curriculum for D.T.

Reviewed April 24 L Andrews