

Lingham Primary School

Design and Technology Policy – Updated June 2009

1. The Importance of Design and Technology to the Curriculum

Design and technology prepares pupils to participate in tomorrow's rapidly changing technologies. They learn to think and intervene creatively in order to improve quality of life. The subject calls for pupils to become autonomous and creative problem solvers, as individuals and members of a team. They must look for needs, wants and opportunities and respond to them by developing a range of ideas, products and systems. They combine practical skills with an understanding of aesthetics and social and environmental issues. As they do so, they reflect on and evaluate past design and technology, its uses and effects. Through design and technology, all pupils can become discriminating and informed users of products, and become innovators.

2. Aims and Objectives

At Lingham Primary School our central aim is to provide a relevant, challenging and enjoyable design and technology curriculum for all pupils. Through teaching design and technology all children will:

- develop the knowledge, skills and understanding necessary to design, make and evaluate products fit for a purpose;
- develop the practical skills to work with a wide range of materials and components;
- develop an understanding of health and safety issues;
- use appropriate vocabulary for naming and describing the equipment, materials and components they use;
- become aware of the impact of technology and its contribution to quality of life;
- become aware of the opportunities for and benefits of using ICT within design and technology.

3. Teaching and Learning

3.1 At Lingham Primary School our principal aim is to develop the children's knowledge, skills and understanding in design and technology. The foundation subjects are taught using a theme-led approach which enables the children to make connections in their learning. Units of work are sourced from a range of resources including QCA, Hamilton Trust and teacher written. Each unit involves the children reviewing existing products, carrying out focussed practical tasks and completing a design and make activity.

3.2 At Lingham Primary School we recognise that we have children of differing ability in all of 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. We achieve this through a range of strategies:

- setting open-ended tasks which can have a variety of responses;
- providing differentiated resources with extension activities for the more able;
- using additional adults to support the work of individual or small groups of children.

4. Design and Technology Curriculum Planning

4.1 Design and technology is a foundation subject in the National Curriculum. Planning is carried out in three phases: long-term, medium-term and short-term. Our long-term plan maps out themes covered by each year group during the year. Coverage of the key skills is highlighted and monitored by the coordinator to ensure progression as the children move through the school.

4.2 Our medium-term plan is adapted from QCA and Hamilton Trust or is written by the class teacher. These plans define what we will teach and ensure an appropriate balance of tasks within each stage of the design process.

4.3 Class teachers complete a short-term plan on a weekly planning sheet showing objectives and differentiation.

5 The Foundation Stage

5.1 Within the Early Years Foundation Stage design technology is delivered through the area of Knowledge and Understanding of the World. The children work towards the Early Learning Goals as set out in the EYFS. Provision of design technology within our Foundation Stage is through:

- continuous provision – construction, outdoor, playdough and the art/workshop area. Within these areas children have access to a wide range of resources and are encouraged to work independently and co-operatively.
- focused adult activities relating to the topic.

5.2 The role of the practitioner is to support and challenge children's thinking through observation, participation, role modelling, making suggestions and using the appropriate vocabulary.

6. Contribution of Design and Technology in other Curriculum Areas

6.1 English

At Lingham Primary School design and technology is a useful tool for teaching aspects of the Literacy Framework. Teachers are expected to use the organisational structure of language, features of recounted texts, use of instructions and non-chronological reports to enhance pupils' literacy skills. Pupils consolidate their skills by reading, writing and following instructions, seeking information and reading captions and labels in their design work. Design and technology also contributes to the teaching of speaking and listening by providing children with the opportunity to compare ideas, methods and approaches in their own work and that of other children, and to say what they think and feel about them.

6.2 Mathematics

The teaching of design and technology provides ample opportunities for the practical application of mathematics. At Lingham Primary School children are encouraged to choose and use appropriate ways of calculating measurement and distances and to check the result of their calculations. They may be required to use fractions and percentages to describe quantities and proportions, read and interpret graphs and scales and identify position and direction.

6.3 Information and Communication Technology (ICT)

At Lingham Primary School we use ICT to support design technology. Children are given opportunities to:

- use draw and paint programs to model ideas;
- gather and present information (e.g. using CD-ROMS or the internet to find information);
- develop their understanding of sequence and control systems;
- develop their awareness of how ICT is used in the wider world.

6.4 Personal, Social and Health Education (PSHE) and Citizenship

Design technology helps children to reflect on how technology affects the environment. They are encouraged to recognise the need to consider the views of others when discussing design ideas and explore the contribution of products to the quality of life of other cultures. Children are encouraged to manage their environment to ensure the health and safety of themselves and others, to develop their sense of responsibility in following safe procedures and understand the importance of personal hygiene.

6.5 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. Groupings allow children to work together and give them the chance to discuss their ideas and feelings about their own work and the work of others. Their work in general helps them to develop a respect for the abilities of other children and encourages them to collaborate and cooperate across a range of activities and experiences. The children learn to respect and work with each other and with adults, thus developing a better understanding of themselves.

7. Teaching Design and Technology to Children with Special Needs

At Lingham Primary School design and technology is taught to all children, whatever their ability. Work in design and technology takes into account the targets set for individual children in their Individual Education Plan (IEPs).

8. Assessment and Recording

8.1 At Lingham Primary School we assess the children's work in design and technology through observation during lessons. Each lesson is reviewed on the short term planning addressing the needs of the children and informing the next step. At the end of each unit of work a judgement is made against the expected outcomes for that unit. The teacher records any children who have not achieved or exceeded those expectations and then uses this information to plan future work. This method of recording enables the teacher to make an annual assessment of progress which forms part of the child's annual report. The end of unit assessments are monitored by the coordinator in order to gain an overall picture of achievement within design technology.

8.2 At Lingham Primary School a portfolio of best practice within design and technology holds samples of work and photographic evidence for each unit. Class teachers are also encouraged to keep samples within the design and technology file held by each year group.

9. Resources

Each year group is responsible for ordering the consumables needed for each unit. The coordinator is responsible for auditing the central resources on a yearly basis and ordering accordingly. Equipment and materials are organised in the central store and will be maintained by the design and technology coordinator. Any shortages, breakages or losses should be reported immediately to the design and technology coordinator.

10. Health and Safety

10.1 Children will develop the knowledge and understanding of health and safety, as consumers and when working with materials and components. This includes:

- Use of materials, tools and techniques in accordance with health and safety requirements;
- Appropriate storage of tools and materials;
- Teaching pupils to recognise hazards in a range of products, activities and environments and to take action to control the risks to themselves and others.

10.2 Class teachers are responsible for writing a risk assessment for each unit of work.

11. Monitoring and Review

The monitoring of the standards of children's work and of the quality of teaching in design and technology is the responsibility of the design and technology coordinator and the Senior Leadership Team. The work of the coordinator also involves supporting colleagues in the teaching of design and technology, being informed about current developments in the subject, and providing a lead and direction for the subject in the school. The coordinator gives the headteacher an annual action plan in which s/he indicates areas for further development.