

Lammack Community Primary School Design and Technology Policy

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Introduction

Design and technology helps to prepare children for the world and situations that we cannot envisage. The subject encourages children to become creative problem-solvers, both as individuals and as part of a team. In addition, design and technology builds resilience in children encouraging them to think for themselves and learn from their mistakes. Through the study of design and technology, children combine practical skills with an understanding of aesthetic, social and environmental issues. They are taught to look for opportunities and to respond to them by developing a range of ideas and designs in order to create a range of products fit for a purpose. Design Technology assists children in developing a greater awareness and understanding of how everyday products are designed and made whilst developing children's confidence and perseverance skills. Throughout Design Technology lessons, children are given opportunities to evaluate their work, identifying the effectiveness of different products whilst building upon their ability to communicate and express their ideas with others through discussion.

Aims and Objectives

- To develop imaginative thinking in children and to enable them to talk about what they like and dislike when designing and making.
- Allow all children the opportunity to be involved in individual and shared experiences, giving opportunity for creativity, co-operation, exploration, self-expression and use of imagination.
- To enable the children to engage in a variety of experiences which allows them to become independent learners and thinkers.
- To teach children the knowledge and understanding, within each child's ability, that will be required to complete the making of their product.
- To teach children the safe and effective use of a range of tools, materials and components.
- To encourage children to select appropriate tools and techniques for making a product, whilst following safe procedures.
- To foster enjoyment, satisfaction and purpose in designing and making.
- To develop children's understanding of the ways in which people have designed products in the past and present to meet their needs.
- To develop children's creativity and innovation through designing and making.
- To develop children's understanding of technological processes, their management and their contribution to society.
- To use ICT software to assist our designing and learning.

Design & Technology in relation to the National Curriculum

- 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



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- 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.

Children will design and make a range of products. A good quality finish will be expected in all design and make activities appropriate to the age and ability of the pupil.

The work covered in each year group ensures a balance of:

- investigative, disassembly and evaluative activities,
- focused practical tasks,
- designing and making assignments.

Teaching and Learning Strategies

We use a variety of teaching and learning styles in Design and Technology lessons. Teachers ensure that the children apply their knowledge and understanding when developing ideas, planning and making products and then evaluating them. We do this through a mixture of whole class teaching and individual/group activities. All ideas will be treated with respect. Children critically evaluate their own work and that of others. They have the opportunity to use a wide range of materials and resources, including ICT.

Children will be given the opportunity to work within three main areas of development during each topic:

1. Investigative, disassembly and evaluative activities.

These activities provide opportunities for the children to explore existing products and to gain skills, knowledge and understanding which can be applied in a design and make assignment.

2. Focused practical tasks.

Focused practical tasks provide opportunities to learn and practice particular skills and knowledge.

3. Design and make assignments.

A design and make assignment provides an opportunity for the children to combine their skills, knowledge and understanding to develop products that meet a real need. In all classes there are children of differing ability. We recognise the fact and provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child.



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Design and Technology – Curriculum Planning

We carry out the curriculum planning in design and technology in three phases: long, medium and short term. The long-term plan maps out the units covered in each term during the key stage.

Our medium-term plans give details of each unit of work for each term. They identify learning objectives and outcomes for each unit, and ensure an appropriate balance and distribution of work across each term.

Class teachers complete a plan for each design and technology lesson. These list the specific learning objectives for each lesson and detail how the lesson will be taught. The class teacher keeps these individual plans, and the class teacher and subject coordinator discuss them on an informal basis.

We plan the activities in design and technology so that they build upon prior learning of the children. We give children of all abilities the opportunity to develop their skills, knowledge and understanding and we also build planned progression into the scheme of work, so that the children are increasingly challenged as they move through the school.

The planning will be completed through a cross curricular approach ensuring the DT has a link to the topic being studied.

The Foundation Stage

We encourage the development of skills; knowledge and understanding that help Reception children make sense of their world as an integral part of the school's work. We relate the development of the children's knowledge and understanding of the world to the objectives set out in the Early Learning Goals. These early experiences include asking questions about how things work, investigating and using a variety of construction kits, materials, tools and products, developing making skills and handling appropriate tools and construction material safely and with increasing control. These activities, indoors and outdoors, attract the children's interest and curiosity.

Cross Curricular Links

Design & Technology linked to the topic which is being taught. It is taught as a subject specific activity through a combination of whole class teaching, group work and individual work. Cross-curricular links are identified when appropriate. Additional opportunities are given for children to design, create and evaluate given products. Through cross-curricular learning such as English lessons children may design, create or evaluate products looking at the product and the purpose considering the wants and needs of others when doing so.

<u>ICT</u>

We use ICT to support Design and Technology teaching when appropriate. Children use software to enhance their skills in designing and making, and use draw and paint programs to model ideas and make repeating patterns. The children also use ICT to collect information and to present their ideas through draw and paint programs.



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Personal, Social. Health Education and Citizenship

We encourage the children to develop a sense of responsibility in following safe procedures when making things. They also learn about health and healthy diets. Through their understanding of personal hygiene, they also learn how to prevent disease from spreading when working with food.

Spiritual, Moral, Social and Cultural Development

Our groupings allow children to work together and they understand how we expect them to do this. Collaborative work in design and technology develops respect for the abilities of others and a better understanding of themselves. In addition, they develop a respect for the environment, for their own health and safety and that of others. They learn to appreciate the value of similarities and differences. A variety of experiences teaches them to appreciate that all people are equally important.

Equal Opportunities

Teachers ensure that children have access to the range of Design & Technology activities and use opportunities within Design & Technology to challenge stereotypes. Children are encouraged and supported to develop their Design & Technology capability using a range of materials. Teachers differentiate activities within Design & Technology to ensure that the specific needs of individual children are best met.

Assessment, Recording and Reporting

Teachers assess work in Design and Technology by making observations of the children working during lessons. They record progress made against the learning objectives for that lesson. At the end of a unit of work, children undertake a review of their work that focuses upon an evaluation of the finished product and an overview of the various tasks undertaken. Teachers make an annual assessment of progress for each child, as part of the annual report to parents. Each teacher passes this information on to the next teacher at the end of each year. Due to the practical nature of Design and Technology, evidence of work undertaken by children can be in the form of teacher's notes or as a photographic record. Samples of the design process and end product are also valuable evidence. The design and technology subject coordinator can review evidence of the children's work in their topic books and booklets made.

Review and Monitoring

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 subject coordinator. The Design and Technology Subject leader monitors planning and examples of work in all year groups. Their work also involves supporting colleagues in the teaching of this subject, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school. Lesson observations are also, occasionally, undertaken and the subject coordinator regularly reviews evidence of the children's work.



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Resources

Funding for Design and Technology will be within the school budget plan for each financial year. There is a central Design and Technology budget to cover the purchase of equipment such as tools, construction kits, consumable materials, books and other resource materials. The Subject Leader will be responsible for ordering equipment and materials. Our school has a wide range of resources to support the teaching and learning of this subject across the school. It is the responsibility of each class teacher to identify additional resource needs in relation to their topics. Classrooms have a range of basic resources; however, equipment and materials have been organised in the Design Technology store. This will be maintained by the Design and Technology co-ordinator. Any shortages, breakages or losses should be reported immediately to the Design and Technology subject leader.

Hygiene and Safety

It is important that children are taught essential life skills to enable them to participate confidently and safely in designing and making in society. Teachers have a duty to introduce children to a wide variety of production processes and the correct tools for the task. Children must design considering health and safety issues and consequences and operate in a safe and hygienic manner when designing. The subject leader, if required, supports teachers to teach the skills necessary ensuring that children can design and make safely.