



Design and Technology Policy

Design and Technology is a 'hands on' subject in which pupils have the experience of evaluating, designing and making products of a high standard. Design and Technology encourages our children to examine their environment, question the world and to think about how and why things work the way they do.

Design and Technology is concerned with the ability to operate effectively and creatively in a rapidly changing technological world. It is an exciting practical subject which allows children to make sense of appliances and processes in their environment.

In Design and Technology, we aim to extend and enhance children's natural curiosity of how and why things work, by providing children with the opportunity to apply and develop their skills.

Through Design and Technology, we aim to present children with a series of real life scenarios, where they become autonomous creative problem solvers. The children will combine practical exercises with the more abstract notions of aesthetics, functional design and making skills. As they do this they will develop their ability to evaluate past and present designs, the uses they have and the impact they have on the real world. Through their Design and Technology, children become more focused on what makes a successful product and more imaginative in how a product could be made or improved.

In Design and Technology, we draw on the children's knowledge and experience from other subject areas particularly English, Maths, Science and Art. Our aim is that it should always be a relevant, enjoyable and creative activity for all children.

Intent:

To give children a sound base of skills and techniques to enable them to design, make and evaluate a product for a specific need or purpose.

To inspire children to use inventive thinking in designing and making products.

To increase children's knowledge and understanding of how innovation, creative thinking and design has shaped our world today and use this to develop their own ideas and products.

To enable children to be creative problem solvers who demonstrate resilience and can work on their own and as part of a team.

To be reflective learners who can recognise where they have adapted and improved their design to better fulfil the design brief.

To be discriminating and informed users of products in their own lives and in the future.

Teaching and Learning:

At Litton CE Primary School, we strive to make learning in design and technology an enjoyable experience. It is taught both through discreet lesson teaching as well as being used in cross-curricular experiences. Design and Technology is a key part of our two-year curriculum plan. Based on the requirements of the National Curriculum for Design and

Technology 2014, specific, progressive skills are identified within each unit of work. Further detail on this is contained in our Design and Technology Knowledge and Progression in Design and Technology, documents. Our curriculum plan is shared with parents, as well as information provided about each individual topic.

We use a broad range of teaching and learning styles in our design and technology lessons. We aim to engage children and follow their interests in the subject. We encourage children to ask questions and, wherever possible, find a method to answer their own questions about a subject.

The school's aim is to provide a design and technology curriculum which will enable all children to reach their full potential in learning through investigating, designing, making and evaluating, and through the development of their knowledge and understanding of the subject. To achieve that aim, the school will plan a range of progressive activities in design and technology which provide opportunities for pupils to:

- develop knowledge and understanding of: materials and components; mechanisms and control systems; structures; existing products, and health and safety
- develop the skills of designing, planning, making, adapting and evaluating products for a particular purpose
- look for needs, wants and opportunities and respond to them by developing a range of ideas and making products and systems
- develop an understanding of technological processes, products and their manufacture, and their contribution to our society
- nurture creativity, design and innovation and become creative and autonomous problem solvers, as individuals and as part of a team
- develop ICT skills to allow children to program and control products, to nurture their understanding of mechanical and electrical systems
- reflect on and evaluate present and past design and technology, its uses and effects
- promote pupils spiritual, moral, social and cultural development

Design and Technology Knowledge

For each topic, pupils will be taught to design, make and evaluate products and receive instruction on technical knowledge. During their time in school, children will also build their skills and knowledge across the key area of cooking and nutrition. When evaluating their own work, children are taught to refer to the design criteria established in the design brief as their basis for deciding on how good their product is. Pupils will also be given opportunities to handle and use a wide range of materials, developing their knowledge and understanding of these through practical design and make activities. The knowledge taught will progress in challenge to develop greater knowledge and understanding. We believe that children's use and understanding of the technical language of design and technology needs to be developed by effective teaching and by a considered sequence of experiences. Therefore, for each topic the children will learn specific, tiered vocabulary. Where possible, this vocabulary is also referenced in other curriculum areas, for example English, Science, Maths and Art. Please see the additional documents: Design and Technology Knowledge and Design and Technology Skills Progression, for detailed information on design and technology knowledge and progression in Key Stage One and Two.

Inclusion:

We teach design and technology to all children, whatever their ability as part of our commitment to teach a broad and balanced curriculum to all children. Teachers provide learning opportunities that match the needs of all of the children in the class. This can include setting tasks which are open-ended and so can have a variety of responses, setting tasks and providing resources of different complexities, sometimes grouping children by ability and setting different tasks to each group and using teaching assistants to support children's participation. Design and Technology lessons take into account the targets set for children in their Individual Education Plans (IEPs). These different approaches need to be used to ensure that all children, including the least and most able, can be working to their full potential in all design and technology lessons.

Equal Opportunities:

The design and technology curriculum aims to provide equal access for all pupils irrespective of race, gender or disability. Teachers ensure that the curriculum is appropriate for the needs of the children. Through individual and collaborative activities which require evaluating and problem solving skills and resilience, we aim to make children think about their place in the world and how they can become positive citizens.

Resources:

Design and technology resources including different types of tools, materials and cooking equipment, are available for all children to use. Design and technology has close links with science, art and computing. The internet can be used to investigate and retrieve information about famous engineers and designers and their products and inventions. The library also contains a range of books relating to the units of work studied as well as broader subjects for interest. All classrooms have access to an interactive whiteboard through which children can watch videos, look at and evaluate existing products, and use a range of resources to support learning.

Management, equipment and resources for design and technology are organised to promote effective use by pupils. Teachers demonstrate the ways in which specific materials or tools will be organised, and pupils are expected to take an increasing level of responsibility for that organisation.

Assessment:

Children demonstrate their ability in design and technology in a range of different ways and this can be assessed by observing children at work, question and answer sessions and assessing and photographing finished work. Teachers will give feedback both within lessons and at the end of a unit of work to enable children to make future progress. Children are also encouraged to make judgements about their own work and how they feel they can improve with specific reference to their design brief. The Skills Progression document is used to assess and record children's progress and plan for their next steps. This information is always shared with parents in the end of year report and can be shared during open mornings and parent consultation evenings

Health and Safety:

The general teaching requirement for health and safety applies to this subject. The class teacher is responsible for ensuring the safety of the children and adults during the lesson by instructing them in the safe and appropriate use of any equipment. Pupils should be made aware of hazards, risks and risk control in every lesson and encouraged to:

- collect, use and return tools and equipment safely
- follow clear instructions
- only move around the classroom when necessary ☑ wear safety equipment whenever necessary
- understand the reasons and importance of health and safety guidance

Risk assessments are undertaken for fieldwork activities or off-site visits and these comply with our Health and Safety Policy

Review:

This policy will be reviewed every two years or as determined necessary, for example if there is a change of guidance.