

LEYS FARM JUNIOR SCHOOL
DESIGN TECHNOLOGY POLICY 2020

Introduction

At Leys Farm Junior School (LFJS), we recognise the importance of Design Technology (DT) and the role it plays in today's rapidly changing world. It enables children to think creatively and foster a desire to become problem solvers both as individuals and as part of a team to enable them to make positive changes to the world around them. Through practical investigations and research, children are able to identify needs and opportunities as well as respond by developing ideas, designing and making products. A greater awareness of the environment and the impact of industry allows children to think about sustainability and develops their reasoning about the wider world whilst considering aesthetic, social and functional values of products and their design.

Aims

- this is a practical subject which provides opportunities for all children to evaluate existing products and improve their own design ideas;
- it will develop skills, knowledge and understanding to be able to use a range of tools, materials and components safely;
- it will develop children's understanding of the technological processes, and the manufacturing of products which have been designed to meet the needs of people, and their contribution to society;
- it will nurture innovation, imagination and creativity through designing and making;
- children will explore values and attitudes to the made world and how we live and work within it;
- children will make cross-curricular links to other subjects and recognise the importance of skills they can use from other areas of the curriculum.

Objectives

For children to:

- experience a range of materials including stiff and sheet materials, mouldable materials, textiles, food and mechanical and electrical components;
- gain knowledge and understanding of DT through investigating, designing, making and evaluating and through the practice and development of skills;
- develop design skills by drawing on their own experience and information sources to generate and present their ideas;
- be able to develop their making skills, by selecting appropriate tools and materials and develop increasingly high standards of accuracy and finish;

- develop knowledge and understanding of mechanisms and materials and how they can be controlled and changed, health and safety and the use of appropriate vocabulary.

Intent

At LFJS, we are committed to providing all children with a variety of learning opportunities to enable them to fully engage in DT. Our aim is to provide a learning environment where all children feel secure and able to take creative risks with design ideas. Children will feel valued and recognise that all suggestions are welcome and they are encouraged to be problem solvers.

The children are taught to combine their designing and making skills with knowledge and understanding in order to design and make a product. Skills are taught progressively to ensure that all children are able to learn and practice in order to develop as they move through the school.

Evaluation is an integral part of the design process and allows children to adapt and improve their product, this is a key skill which they need throughout their life. DT allows children to apply the knowledge and skills learned in other subjects, particularly Maths, Science and Art.

Children's interests are captured through thematic learning, ensuring that links are made in a cross curricular way, giving children motivation and meaning for their learning. Children find out about, design and make a variety of hot and cold food linked to their theme and from different countries and periods of history.

Implementation

At LFJS, the DT curriculum aims to enable all children, regardless of background, ability, additional needs, to flourish and become the very best version of themselves they can possibly be. We teach the National Curriculum, supported by a clear skills and knowledge progression. This ensures that skills and knowledge are built on year by year and sequenced appropriately to maximise learning for all children.

Through a variety of creative and practical activities, we teach the knowledge, understanding and skills needed to engage in the process of designing and making. The children work in a range of relevant contexts to allow them to experience designing and making in varied settings.

The children are taught to develop their skills to research and develop their own design criteria when looking at existing products. They are encouraged to generate ideas, developing modelling and communicating these through discussion and sketches including computer designs. They will make their designs using a variety of suitable tools and equipment to perform practical tasks. They will be able to select appropriate components and materials according to functional properties and aesthetic qualities. While evaluating, they will analyse a range of existing products against their own products and consider the views of others to improve their work.

Impact

By the time children leave LFJS they will develop an excellent attitude to learning and independent working. They will have ability to use time efficiently and work constructively and productively with others. Children will have the ability to carry out thorough research, show

initiative and ask questions to develop an exceptionally detailed knowledge of users' needs. Children will have the ability to act as responsible designers and makers, working ethically, using finite materials carefully and working safely. They will gain a thorough knowledge of which tools, equipment and materials to use to make their products. They will have the ability to apply mathematical knowledge and skills accurately. Children will have the ability to manage risks exceptionally well to manufacture products safely and hygienically. All children will demonstrate their passion for the subject.

Monitoring and Reviewing

The monitoring of the standards of children's work and of the quality of teaching in DT is the responsibility of the design and technology subject leader. The work of the subject leader also involves supporting colleagues in the teaching of DT, being informed about current developments in the subject, and providing a strategic lead and direction for the subject in the school. The DT subject leader gives the headteacher an annual report which evaluates the strengths and weaknesses in the subject and indicates areas for further improvement.

Assessment

Children's work is assessed as the unit progresses against the learning objectives. Informal assessments are ongoing during the term and formal assessments are made as and when necessary, usually at the end of a unit of study using the NC programmes of study.

Feedback is given to children in accordance with the school's marking and feedback policy.

Learning Outcomes

A good quality finish will be expected in all design and make activities appropriate to the age and ability of the child. The children will be expected to record their designing and making by using design sheets or process diaries as appropriate. Work may be displayed in classrooms or corridors to further enhance the need for accuracy and precision when designing and making.

Equal Opportunities and Inclusion

It is important for all children to have equal access to the DT irrespective of race, gender or ability. Examples of technology from other cultures enrich the DT curriculum. Opportunities within DT can be used to challenge stereotypes.

Pupils with special educational needs are considered when planning the curriculum and opportunities are planned for more able and those with special educational needs.

Organisation

Curriculum planning in DT is carried out in two phases which include long term planning and medium/short term planning. The long-term plan maps out the units covered in each term within each key stage. All staff are involved in the planning stage to make links where possible to themes/topics being taught within the term.

Activities are planned to enable children to build on prior learning. Children develop their skills, knowledge and understanding as they progress through each scheme of work to enable them to be increasingly challenged as they move through the school.

Activities include:

- activities where children are able to investigate, disassemble and evaluate products (IDEAs). This allows children to examine and test the products of others (commercial or their classmates) to make judgements about the quality or the methods by which it was produced;
- focused practical tasks (FPT) where children practice particular skills. This allows children to be set tasks where they are able to practice a desired skill. This is not taught in isolation and children may still produce an item;
- tasks to allow children to design and make products and activities (DMA). Children will be set a design task or brief from which there will be a variety of outcomes.

Health and Safety

Children will be taught the safe use of equipment and to be responsible for safe working, handling and storage of tools and equipment. Guidelines for safe food working are available in the food technology room and staff are encouraged to obtain a food hygiene certificate. The school office has a list of any food allergies as identified by parents and a list is kept with each class teacher. We are lucky enough at LFJS to have a dedicated food technology room and classes are encouraged to use this on a weekly basis. Risk assessments have been carried out and a copy can be found in the food technology room. This includes the safe and locked storage of sharp knives which are used by adults and electrical food preparation items.

External Links

Children have the opportunity to work with visitors to school from the wider community and develop skills accordingly. Children regularly take part in food technology activities when 'A Taste of History' visits school. They are encouraged to participate in a number of food preparation, cooking and tasting activities based on food from other countries, other periods in history, and environmental ideas.

Links with other organisations including the Royal Horticultural Society and Simply Gardening have developed the use of the school gardens allowing classes to prepare, sow and grow, and harvest their own crops. These are used for their own school meals, playtime snacks and after school clubs.

Impact of DT in Other Curriculum Areas

DT is a cross curricular subject and has many links with other subjects. Strong links are made with English by providing valuable opportunities to reinforce what children have been doing during the lesson. Discussion, drama and role play are all important elements to help children develop their understanding that people have different views in DT. Children will be able to record their ideas and suggest ideas to improve their designs.

Maths is often linked to projects through means of measuring, weighing, scaling, making predictions and hypothesising about products to be made based on evaluating and disassembly or pre-existing products.

Many units provide opportunities for children to use and develop scientific knowledge and understanding. There are opportunities for pupils to use their knowledge and understanding when working with a range of materials, e.g.: a range of fabrics and a range of different types of paper and card. Children will work with electrical circuits and switches and food products related to healthy lifestyles and historical food.

DT contributes to the teaching of personal, social, health education and citizenship. As well as encouraging children to follow safe working practices when designing and making, they learn about health and the importance of a healthy diet. They learn how to be safe when working with food and tools. Children are able to be responsible and work to a deadline as well as set targets for their work.

The teaching of DT offers the opportunity to support spiritual, moral, social and cultural development by means of collaborative working. Children often have the opportunity to express their thoughts, ideas and opinions in a safe and supportive environment. Respect for others is developed through these tasks as well as a respect for our environment, their health and safety and of each other. Cultural awareness is developed as children appreciate the value of similarities and differences.

Online learning is a valuable research tool to allow children to be aware of existing products and assembly methods including industrial production. E-safety is always at the forefront when researching and children are made aware of suitable sites and how to filter. Children may use desktop computers or iPads to research but this will always be with adult supervision.

British Values

Children at LFJS are taught that British Values are an essential element in DT, to enable children to be tolerant and respectful to all. They are encouraged to reflect on the diverse and multi-cultural world we live in and to understand the views and beliefs of a variety of cultures, learning to respect and understand these and respect the valuable knowledge shared by them through the process of design and engineering. Children are introduced to British inventors how they have helped to encourage the DT industry.

Democracy is covered to enable children to discuss existing designs and how they are suitable for their purpose. They can vote for their favourite ideas/design for a particular product. The rule of law is covered through patent and an awareness that designs are protected through Copyright or Patent. Equality is delivered through supporting all children to access the curriculum. Individual liberty is recognised through being able to make judgements regarding designs and express our thoughts freely. Respect and tolerance for all faiths and religions is woven into every lesson and children are taught to respect the contribution from all cultures.

Cultural Capital

AT LFJS, we believe all children should be able to access a well-planned DT curriculum, giving access to varied opportunities which will allow them to understand the wide ranging and diverse nature of industry and how different systems and processes have helped to develop the modern world.

Children will discover a range of key figures who have helped shape the world with their innovative designs. Children will understand how key designers have influenced each other to develop successful products. Children will develop their own skills to assist with a range of

joining techniques and stiffening methods as well as investigations to help children understand and use electrical systems in their products.

Activities are carefully considered and lessons are planned to make links with local industry and recognise global applications to enable children to obtain an accurate understanding of processes, A view which reflects the local community and stretches out to the global community.

Resources

Our school has a wide range of resources to support the teaching of DT across the school. Classrooms have access to a range of resources and specialised equipment kept in the DT store. A purpose-built food technology room is fully equipped with work stations and appropriate utensils/cooking resources linked to Let's Get Cooking resources. Specialist cooking equipment is also available. Knives and sharp cooking implements are kept in locked storage within the food technology room.

Reviewed: November 2020