

# Design and Technology Policy



Member of staff responsible: Debbie Martin  
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## MISSION STATEMENT

St Clare's is a Christ-centered family where everyone is valued and respected. We learn and grow, whilst strengthening our relationship with God and one another. Together in His love, we can achieve our full potential.

Play, learn and grow together with Christ

## AIMS

Design and Technology is a foundation subject within the National Curriculum. The aims of Design and Technology in this school are to:

- Encourage ingenuity and creativity in response to a problem or recognised need
- Develop pupils' abilities to refine and communicate their ideas through drawing, discussion and prototypes
- Increase each child's knowledge of a wide range of materials and their properties
- Enable pupils to select and use appropriate tools and products to achieve the required result
- Ensure pupils are aware of health and safety issues in Design and Technology
- Develop pupils' abilities to evaluate their own products, using an iterative approach, and the products of others, giving reasons for their opinions
- Encourage pupils to consider how products could be refined or improved

The school will provide opportunities for children to experience designing, making and modifying, using a wide range of materials including card, textiles, construction materials and food. We aim to develop children's design and technology capability through focused skills teaching and design and make projects during which pupils are able to apply and improve their practical skills and deepen their knowledge and understanding of materials, equipment and the design process. Children will be supported in continually evaluating their work for quality and suitability for the intended purpose. They will also have the opportunity to disassemble and evaluate products. Children will also learn about the lives and achievements of local designers and inventors. It is hoped that they will have enjoyable, practical learning experiences.

Pupils will be encouraged to draw upon their experiences in other curriculum areas eg Computing, Mathematics, Science and Art.

These aims are consistent with our school philosophy and take account of the LEA Curriculum Policy and National Curriculum Guidance.

## **STATUTORY REQUIREMENT**

*Statutory requirements for the teaching and learning of Design and Technology are laid out in the National Curriculum Design and Technology Document (2014) and in the Expressive Arts and Design section of the Early Years Framework.*

### **Foundation Stage**

Children will have daily opportunities to safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.

### **Key stage 1**

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making.

They will work within the four materials areas of food, textiles, sheet materials 2D and construction 3D. The children will have the opportunity to plan, make and evaluate within all four areas.

Children will develop their technical knowledge through building structure and exploring how they can be made stronger or more stable. They will explore and use mechanisms, for example, levers, wheels and axles.

## **Key stage 2**

Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making.

They will work within the four materials areas of food, textiles, sheet materials 2D and construction 3D. The children will have the opportunity to plan, make and evaluate within all four areas.

Children will continue to develop their technical knowledge by applying their understanding of how to strengthen more complex structures. They will use mechanical systems in their products, for example, gears, pulleys, cams, levers and linkages. They will have the opportunity to use electrical systems in their products. They will apply their understanding of computing to program, monitor and control their products.

### Cooking and nutrition

As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils, will also open a door to one of the great expressions of human creativity.

Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life. (DfE, 2013)

Pupils should be taught to:

#### Early Years Foundation Stage and Key Stage 1

- Use the basic principles of a healthy and varied diet to prepare dishes
- Understand where food comes from.

#### Key Stage 2

- Understand and apply the principles of a healthy diet
- Prepare and cook a variety of predominantly savoury dishes using a

range of cooking techniques.

- Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

## SUBJECT ORGANISATION

Planning closely matches the guidance provided by Lancashire's Planning Support Materials, and is cross-referenced with the National Curriculum 2014 requirements to ensure continuity and progression. Teachers' half-termly plans are annotated to indicate where plans have been altered to meet the specific needs of a particular class. Weekly plans break the unit into smaller sections and emphasise the learning intention(s).

## APPROACHES OR METHODS

Within classes pupils are taught individually, as groups or as a class when appropriate. It is recognised that through group work, co-operation, communication and collaboration are promoted, but to ensure effective differentiation, match and assessment children may sometimes be required to work individually.

Pupils receive direct skills teaching and are provided with real experiences in appropriate contexts in which to put their skills to use. Design Technology offers meaningful situations in which children can apply mathematical, scientific and artistic understanding. Within the revised 2014 curriculum, links with history and geography are strengthened as children learn about local inventors and the origins of their food from around the world. Children's thoughts and ideas are often extended using computers and computer control, together with educational visits, library loans and speakers coming into school.

The subject requires the provision of a range of materials and equipment to enable children to work in a variety of materials areas. Teachers should allow children to select their own equipment provided this does not contravene health and safety requirements. (see LCC Tools and Equipment Guidance).

The curriculum will need to be organised to meet the needs of individual pupils, their age and ability.

## THE USE OF ICT

Information and Communication Technology (ICT) enhances the teaching of design and technology, wherever appropriate, in all key stages. Children may use software to enhance their skills in designing and making things. Younger children can use simple software to enhance their learning. The children also use ICT to collect information and to present their designs through a range of design and presentation software.

## ASSESSMENT AND TARGET SETTING

Assessment is used to inform future planning and to provide information about individuals throughout their time in this school. Assessment techniques will ensure that teachers assess the on-going process and not just the finished products or outcomes. These techniques should include:

- Teachers' observation of pupils
- Teacher-pupil discussion and teacher questioning
- Pupils' drawings, notes, models, comments and written work
- Artefacts made by pupils
- Pupils' on-going analysis of their achievements
- Photographs of children involved in the design process
- Use of Computing as appropriate

When reviewing the children's progress in Design and Technology, teachers must consider children's:

- Knowledge and understanding of materials and components
- Understanding of mechanisms and computer control
- Ability to use materials and equipment safely
- Ability to develop, plan and communicate design ideas
- Interest and motivation in designing and making, using an iterative process
- Ability to appreciate and produce items of quality that meet the intended purpose

## Reporting Progress

Teachers use their assessments to inform planning and form expectations. Children's individual progress and achievements in Design and Technology are shared with parents in the form of a written report.

Furthermore, each teacher meets with a child's next teacher and discusses progress, successes and targets.

### **Inclusion**

In planning and delivering the Design and Technology curriculum, teachers must ensure all children experience effective learning opportunities. To meet the specific needs of individuals, attention must be given to:

- Setting suitable learning challenges
- Responding to pupils' diverse learning needs
- Overcoming potential barriers to learning and assessment for individuals and groups of children

### **Equal Opportunities**

It is the responsibility of all the teachers to ensure that all pupils, irrespective of gender, ability (including gifted and talented), ethnicity and social circumstance, have access to the curriculum and make the greatest progress possible.

### **Special Educational Needs**

All pupils will have access to a broad, balanced curriculum, which includes Design and Technology, and have the opportunity to make the greatest progress possible. In particular Design and Technology offers the opportunity for children to achieve in a practical subject, as they are encouraged to communicate in different ways.

### **9. ROLE OF SUBJECT LEADER:**

- lead the development of design and technology in 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
- review and monitor the success and progress of the planned units of work
- order stock linked to the planned units of work at the end of each term

- be responsible for the organisation and maintenance of design and technology resources

## PARENTAL INVOLVEMENT

Parents are encouraged to support their child's learning.

### **The Governing Body**

Reports are made to the governors on the progress of Design and Technology provision.

This policy will be reviewed every three years or in the light of changes to legal requirements.

### **CONCLUSION:**

*This policy also needs to be in line with other school policies and therefore should be read in conjunction with the following school policies:*

- *Teaching and Learning Policy*
- *Assessment and Record Keeping*
- *Responding to pupils' work / Feedback / Marking policy*
- *Special Educational Needs Policy*
- *ICT Policy*
- *Equal Opportunities Policy*
- *Health and Safety Policy*