



St Gregory's Primary DT Policy

'Successes teach you nothing. Failures teach you everything. Making mistakes is the most important thing you can do.'

James Dyson

Rationale:

Design and technology prepares children to take part in the development of tomorrow's rapidly changing world. Creative thinking and **curiosity** when problem solving encourages children to make positive changes to their quality of life. The subject encourages children to become autonomous and creative problem-solvers, taking **responsibility** both as individuals and as part of a team. It enables them to identify needs and opportunities and to respond by developing ideas, demonstrating **resilience**, and eventually making products and systems. Through the study of design and technology, they combine practical skills with an understanding of aesthetic, social and environmental issues, as well as of functions and industrial practices. This allows them to **reflect** on and evaluate present and past design and technology, its uses and its impacts. Design and technology helps all children to become discriminating and informed consumers and potential innovators.

Responsibility curiosity resilience reflective

Aims:

- To develop imaginative thinking in children and to enable them to be **reflective** and talk about what they like and dislike when designing and making things;
- To enable children to be **curious** and talk about how things work, and to draw and model their ideas;
- To encourage children to select appropriate tools and techniques for making a product, whilst following safe procedures;
- To explore attitudes towards the 'made' world and the **responsibility** we have as we live and work within it;
- To develop an understanding of technological processes and products, their manufacture and their contribution to our society;
- To foster enjoyment, **resilience**, satisfaction and purpose in designing and making things.

Objectives:

KS1 Objectives

Design

- Design purposeful, functional, appealing products for themselves and other users based on design criteria.
- Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.

MAKE

- Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].
- Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.

EVALUATE

- explore and evaluate a range of existing products
- evaluate their ideas and products against design criteria

TECHNICAL KNOWLEDGE

- build structures, exploring how they can be made stronger, stiffer and more stable
- explore and use mechanisms [for example, levers, sliders, wheels and axles] in their products

KS2 Objectives

Design

- Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.
- Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design.

MAKE

- Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.

- Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.

EVALUATE

- Investigate and analyse a range of existing products.
- Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.
- Understand how key events and individuals in design and technology have helped shape the world.

TECHNICAL KNOWLEDGE

- Apply their understanding of how to strengthen, stiffen and reinforce more complex structures
- Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
- Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
- Apply their understanding of computing to program, monitor and control their products

Foundation Stage

- We encourage the development of creativity, skills; knowledge and understanding that help children make sense of their world as an integral part of the school's work. We relate the development of the children's design to the objectives set out in the Early Learning Goals. These underpin the curriculum planning for children aged three to five. This learning forms the foundations for later work in design and technology. These early experiences include asking questions about how things work, investigating, using and being creative with a variety of construction kits, materials, tools and products, developing making skills and handling appropriate tools and construction material safely and with increasing control. We provide a range of experiences that encourage creativity, exploration, observation, problem solving, **resilience**, critical thinking and discussion. These activities, indoors and outdoors, attract the children's interest and **curiosity**.

Teaching:

The school uses a variety of teaching and learning styles in design and technology sessions. The principal aim is to develop children's knowledge, skills and understanding in design and technology. 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. Within lessons, we give children the opportunity both to work on their own and to collaborate with others, listening to other children's ideas and treating these with respect. Children critically evaluate existing products, **reflecting** on their own work and that of others. They have the opportunity to use a wide range of materials and resources, including computing. In all classes there are children of differing ability. At St Gregory's Catholic Primary School we recognise this fact and provide suitable learning opportunities for all children by matching the challenge of the task to the ability of the child.

Equality:

Equal Opportunities

- All pupils should have equal access to the design and technology curriculum irrespective of race, gender or ability. Examples of technology from other cultures can be a rich resource in the curriculum.
- Pupils with special needs should be considered when planning units of work and opportunities for differentiation should be considered for both more able and less able pupils.
- Design and Technology provides opportunities to address some of the gender stereotypes children may have. Steps should be taken in classroom organisation to ensure that all pupils experience all activities, tools and materials.

Inclusion when teaching design and technology

At St Gregory's Catholic Primary School we teach design and technology to all children, whatever their ability. Design and technology forms part of the school curriculum policy to provide a broad and balanced education to all children. Through our design and technology teaching we provide learning opportunities that enable all pupils to make progress. We do this by setting suitable learning challenges and responding to each child's different needs. Assessment against the National Curriculum allows us to consider each child's attainment and progress against ARE.

We try to enable pupils to have access to the full range of activities involved in learning design and technology. Where possible we try allow children to participate in activities outside the classroom, for example, a museum, factory trip or outdoor learning within the school grounds.

Reasonable Adjustments in Design Technology

The curriculum leader in Design Technology recognises the importance of ensuring that children with identified Special Educational Needs and/or Disabilities have access to an ambitious Design Technology curriculum. Within the curriculum area of Design Technology SEND children will be provided with reasonable adjustments through their tasks and level of challenge provided. Advice can be sought from the school's SENDCO where applicable.

Resources

Our school has a wide range of resources to support the teaching of design and technology across the school. Classrooms have a range of basic resources, with the more specialised equipment being kept in the design and technology store.

Health and Safety

All children should be made aware of the need to use equipment safely and take responsibility for safe working, handling and storage of tools and equipment.

- A list of children with specific allergies is available from the office. Teachers should familiarise themselves with this and avoid using foods such as nuts or foods high in colouring etc., which might cause an adverse reaction. Staff should also be sensitive to any cultural food taboos of children within their class.
- An oven and other electrical equipment such as blenders are available for food based DT. A risk assessment for the use of these resources has been devised.

Assessment and record keeping:

Teachers will assess informally throughout lessons by questioning, oral feedback and where appropriate written work. Pupils have learning objectives linked to the programme of study in their books which are highlighted in Green (achieved) and Pink (needs revisiting) in the same ways as other foundation subjects in school. Teachers will use this information to complete an assessment grid and the end of each unit. This information is used to make an end of year judgement which is shared with parents on the end of year report.

Subject leader:

The subject leader will observe DT lessons as part of the school monitoring cycle. Evidence will also be uploaded to See Saw for monitoring purposes.