



Curriculum Statement for
Design and Technology (DT)
'Be yourself, but be it very well'

Article:

Education must develop every child's personality, talents and abilities to the full. It must encourage the child's respect for human rights, as well as respect for their parents, their own and other cultures, and the environment. (UNCRC Article: 29)

Every child has the right to relax, play and take part in a wide range of cultural and artistic activities.

(UNCRC Article: 31)

Please see also our overall curriculum statement.

"Design is not just what it looks like and feels like. Design is how it works." -Steve Jobs.

Intent

At St. Cuthbert's Catholic Primary School, children receive a Design and Technology (DT) curriculum, which allows them to exercise their creativity through designing and making. The children are taught to combine their designing and making skills with knowledge and understanding in order to design and make a product. At St Cuthbert's, we want to inspire the next generation of inventors and engineers who will create something awe inspiring for generations to come and join the likes of Elon Musk and Antony Gormley. A high-quality DT education should be inspiring, rigorous and practical. Pupils will be given the opportunity to be creative and use their imagination to design and make products that solve real and relevant problems within a variety of contexts. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. Design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

Our aims in teaching DT are that all children will develop:

- Significant levels of originality and the willingness to take creative risks to produce innovative ideas and prototypes.
- An excellent attitude to learning and independent working.

- The ability to use time efficiently and work constructively and productively with others.
- The ability to carry out thorough research, show initiative and ask questions to develop an exceptionally detailed knowledge of users' needs.
- The ability to act as responsible designers and makers, working ethically, using finite materials carefully and working safely.
- A thorough knowledge of which tools, equipment and materials to use to make their products.
- The ability to apply mathematical knowledge.
- The ability to manage risks exceptionally well to manufacture products safely and hygienically.
- A passion for the subject and knowledge of, up-to-date technological innovations in materials, products and systems.

Skills are taught progressively to ensure that all children are able to learn and practise 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 theme learning, ensuring that links are made in a cross curricular way, giving children motivation and meaning for their learning. Children will also learn basic cooking skills, the importance of having a healthy, varied diet and have an understanding of where food comes from. The skills are taught per Key Stage as opposed to per Year Group.

Previous knowledge is reviewed at the beginning of each topic and experiences are recorded in an ongoing sketchbook which contains work from both Art and DT. This sketchbook moves through the school with the children to show a clear progression of the skills they have been taught.

A wide range of experiences are offered to children to widen and enhance their ability in DT and challenge is provided through these experiences. This ensures the needs of all abilities and talents can be met. Our whole curriculum is shaped by our school vision which aims to enable all children, regardless of background, ability, additional needs, to be themselves, but to be it very well. Our children are encouraged to take ownership and pride in their work and to personalise their sketchbooks creatively.

Implementation

DT is taught in blocks in the second half of each term (alternating with Art). Each unit consists of lessons of 1 hour over a period of 6 weeks. (See separate document for more detailed long term plans.)

Year Group	Autumn	Spring	Summer
Reception Class	Physical development - Moving and Handling: <ul style="list-style-type: none"> • To use simple tools to effect changes to materials. • To handle tools, objects, construction and malleable materials safely and with increasing control. 		

In Reception, children have on-going access to a creative area to explore child initiated themes and ideas.						
1		Control - Moving Pictures		Cooking and nutrition - Dips and Dippers		Structure - designing and making boats
2		Textiles - Christmas bauble		Cooking and Nutrition - Sensational salads		Mechanisms - levers and linkages
3		Cooking and Nutrition - The Great Cuthbert's Bread Off		Mechanism and Control - Pneumatic Monsters		Structure - Design a magnetic game/photo frames
4		Cooking and Nutrition - Edible Garden		Control - Electrical systems Light it up - Torches/light boxes		Textiles - Roman/Anglo Saxon Purses (Visit to Arbeia/ <u>Vindolanda</u>)
5		Structure - Marbelous structures		Cooking and Nutrition - Global Food (Tesco Farm to Fork?)		Programming - Programming Adventures
6		Mechanisms - Automata Animals (or a cross curricular project involving cams) (Nissan visit?)		Textiles - Pillow cases/Pencil cases/Phone cases		Cooking and Nutrition - Food from our locality

Design and technology in the EYFS

Design and technology in the EYFS is informed by and aligned to the following related early learning goals:

Personal, Social and Emotional Development ELG:

- Self-Regulation Set and work towards simple goals, being able to wait for what they want and control their impulses when appropriate; Give focused attention to what the teacher says, responding appropriately even when engaged in activity, and show an ability to follow instructions involving several ideas or actions.

Fine Motor Skills ELG:

- Use a range of small tools, including scissors, paint brushes and cutlery. Begin to show accuracy when drawing.

Expressive Arts and Design ELG: • Creating with Materials Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. Share their creations, explaining the processes they have used.

The staff plan for children to experience creative opportunities and develop key skills and techniques within the EYFS curriculum. There will be a focus on developing fine motor skills and learning how to plan, design and produce the finished project. The knowledge and skills acquired and developed in the EYFS will provide the foundation or those identified in subsequent years. Reception will be, where appropriate, included in whole school projects, workshops, events and competitions associated with Design and Technology.

Threshold Concepts

The threshold concepts for this subject are:

- **Master practical skills**
- **Design, make, evaluate and improve**
- **Take inspiration from design throughout history**

SEND and disadvantaged pupils

SEND and disadvantaged pupils have the DT entitlement as all other pupils and are offered the same curriculum. However, particular application/tools are used when:

- Pupils with learning difficulties need to be motivated to practise basic skills regularly and intensively. They will benefit from the use of tasks which practice skills which are set in the context of an enjoyable and motivating scenario
- Pupils have physical disabilities and communication difficulties

Links to core subjects

English

Design and Technology contributes to the teaching of English by providing valuable opportunities to reinforce prior learning. Discussion, drama and role-play are important ways for the children to develop an understanding that people have different views about Design and Technology. The evaluation of products requires children to articulate their ideas and to compare and contrast their views with those of other people. Through discussion, children learn to justify their own views and clarify their design ideas.

Maths

In Design and Technology, children learn to measure and use equipment correctly, generate nets of shapes in order to create packaging and weigh and measure accurately. They will also learn about size and shape and make "real" use of their mathematical knowledge in order to be creative and practical in their designs and modelling.

Science

In an increasingly globalised world, science and technology are at the heart of life in the 21st century. Scientific concepts are revised in a number of DT units throughout the school, including motors, the environment, reversible and irreversible change and heating, melting and cooling. Where these links occur, specific reference will be made to the scientific concept being discussed at that time.

RE

Whilst there is no direct link between DT and RE, our children learn about ethical working, Fair Trade and sustainability across the whole school. These all link with the Universal Church topic.

Impact

By the time children leave our school they will have:

- An excellent attitude to learning and independent working.
- The ability to use time efficiently and work constructively and productively with others.
- The ability to carry out thorough research, show initiative and ask questions to develop an exceptionally detailed knowledge of users' needs.
- The ability to act as responsible designers and makers, working ethically, using finite materials carefully and working safely.
- A thorough knowledge of which tools, equipment and materials to use to make their products.
- The ability to apply mathematical knowledge and skills accurately.
- The ability to manage risks exceptionally well to manufacture products safely and hygienically.
- An understanding of design in an historical and geographical setting.
- A passion for the subject.

Monitoring

- Lesson visits
- Learning walks
- Work scrutiny
- Planning scrutiny
- Reports to Governors
- Learning Council

Assessment

Assessment and feedback to pupils is usually carried out by observation and oral feedback during lessons, and written feedback in pupil sketchbooks. Progression and achievement are tracked against learning objectives.

Subject Leader: Helen Bewley

Link Governor: David Quinn

Date: March 2023

To be reviewed: Spring 2025