St Cuthbert's RCVA Primary

DT Curriculum Statement

NATIONAL CURRICULUM PURPOSE OF STUDY

THE NATIONAL CURRICULUM STATES THAT

Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. 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. High-quality design and technology education makes an essential contribution to the creativity, culture, wealth and well-being of the nation.

Aims

The national curriculum for design and technology aims to ensure that all pupils:

- develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasing technological world
- bulid and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users
- critique, evaluate and test their ideas and products and the work of others
- understand and apply the principles of nutrition and learn how to cook.

In addition, at St Cuthbert's we ensure that our children have links with our feeder secondary school in order to visit the school and apply their knowledge using the resources they have available.

NATIONAL CURRICULUM REQUIREMENTS FOR SUBJECT CONTENT AT KS1

By the end of each key stage, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study.

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 should work in a range of relevant contexts.

Pupils are taught to:

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 (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 mechanisms (levers, sliders, wheels and axles), in 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 live 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.

Pupils should be taught to:

- use the basic principles of healthy and varied diet to prepare dishes
- understand where food comes from.

NATIONAL CURRICULUM REQUIREMENTS FOR SUBJECT CONTENT AT KS2

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 should work in a range of relevant contexts.

Pupils are taught to:

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 (cutting, shaping, joining and finishing), accurately
- selects 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 (gears, pulleys, cams, levers and linkages)
- understand and use electrical systems in their products (series circuits incorporating switches, bulbs, buzzers and motors)
- apply their understanding of computing to program, monitor and control their products.

Cooking and nutrition

- understand and apply principles of a healthy and varied diet
- prepare and cook a variety of predominantly savoury dishes using a range of techniques
- understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

CURRICULUM INTENT

- To ensure pupils have learned the knowledge and skills set out in the National Curriculum.
- To ensure learning of skills in DT is progressive.
- To ensure our curriculum promotes resilience and co-operation and celebrates effort and improvement.
- To ensure pupils are encouraged to experiment and reflect on their own work.

It is the intent of St. Cuthbert's Primary for Design Technology to be taught in all year groups through at least one topic per term, which includes a topic relating to food. Design Technology projects are often cross-curricular – linking to other subjects taught.

CURRICULUM IMPLEMENTATION

SEQUENCE

The teaching of Design Technology across the school follows the National Curriculum. Children design products with a purpose in mind and an intended user of the products. Food technology is implemented across the school with children developing an understanding of where food comes from, the importance of a varied and healthy diet and how to prepare this.
Design and technology is a crucial part of school life and learning and it is for this reason that as a school we are dedicated to the teaching and delivery of a high quality Design and Technology curriculum; through well planned and resourced projects and experiences.

Design and Technology also embeds our St. Cuthbert's Learning Behaviours. It is an inspiring, rigorous and practical subject, requiring creativity, resourcefulness, and imagination. Pupils design and make products that solve real and relevant problems within a variety of contexts. It is very cross - curricular and draws upon subject knowledge and skills within Mathematics, Science, History, Computing and Art. Children learn to take risks, be reflective, innovative, enterprising and resilient. Through the evaluation of past and present technology they can reflect upon the impact of Design Technology on everyday life and the wider world.

TEACHING & LEARNING

We use a variety of teaching and learning styles in design and technology lessons. Teachers ensure that the children apply their knowledge and understanding when developing ideas, planning, making products and evaluating them.

We do this through a mixture of whole class teaching and individual/group activities. All children's ideas are treated with respect and they are encouraged to critically evaluate their own work and that of others. They have the opportunity to use a wide range of materials and resources, including ICT.

We teach design and technology to all pupils, whatever their ability, and provide learning opportunities that enable them to make progress. We do this by setting suitable learning challenges and respond to each child's needs. We strive to support individual needs and enable children to achieve their full potential through appropriate challenge and questioning.

Children are encouraged to think and work independently and collaboratively evaluating, extending and improving their ideas.

EXTRA CURRICULAR OPPORTUNITIES

SPECIAL EDUCATIONAL NEEDS

All lessons are tailored to the needs of the children in the class. Teachers model activities as well as providing different levels of difficulty to support less able pupils and lesson are adapted to be inclusive of physical disabilities.

SPIRITUAL, MORAL, SOCIAL & CULTURAL DEVELOPMENT

Opportunities for Spiritual development through celebrating personal creativity, reviewing and evaluating created things, expressing awe and wonder at how existing products were invented and appreciating children's own designs and ideas.

Opportunities for Moral development are through asking questions about the effect of technical change on human life and the world around them. Children learn about nutrition and how to cook as a life skill.

Opportunities for Social development can be through working cooperatively as a group, taking time to help each other, sharing tools and resources. Children can also explore the dilemmas they may face when designing something and develop practical solutions to these problems.

An opportunity for Cultural development considers cultural influences on design, questioning functionality versus aesthetics. Children also consider how cultures have changed designs to reflect their communities. Children experience foods from around the world and have the opportunities to work with textiles from around the world.

CURRICULUM IMPACT

ASSESSMENT & RECORDING

In design and technology, teachers assess children's progress by making observations during lessons and discussions, marking workbooks and evaluating end products. Teachers make progress judgements against learning objectives and staged success criteria.

At the end of a unit, children review their own and each other's work, focusing upon an evaluation of the finished product and how effectively it meets the learning objective.

Due to the practical nature of design and technology, evidence of work undertaken by children can be in the form of teacher's notes or as a photographic record. Samples of the design process and end product are also valuable evidence.

MONITORING & REVIEW

Design Technology is monitored by the subject leader throughout the year in the form of book monitoring, looking at outcomes and pupil interviews to discuss their learning and understanding and establish the impact of the teaching taking place.

EXTERNAL VERIFICATION

We liaise with other schools in our local area using the SeaLinks moderation meetings. This includes one of our feeder schools. We also liaise closely with our main diocesan feeder, St Bede's to make links for cookery and other DT units. We are in the process of developing our key end points in relation to our feeder schools.