

Design and Technology Policy

'Learning and growing together: inspired by the love of Jesus'

Our Mission Statement lies at the heart of all that we do and helps us to define our sense of direction and purpose.

Our curriculum is designed around what makes a Catholic school distinctive and reflects the key areas identified by The Bishop's Conference of England and Wales 2014. These include:

- The Search for Excellence
- The Uniqueness of the Individual
- The Education of the Whole Person
- The Education of All
- Moral Principles

Intent – How is the school's curriculum is coherently planned and sequenced towards cumulatively sufficient knowledge and skills for future learning and employment?(Ofsted Handbook 2019)

The curriculum for Design Technology has been set in light of the requirements of the National Curriculum:

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.

At St Aidan's, we look to ensure a **clear programme** to support teaching and learning in which key skills, knowledge and understanding are made clear on a **weekly basis** across the **term**. We look to use the distinctive features around us as well as rich local history to ensure the curriculum is **interesting** and **distinctive**.

It is the **responsibility** of teachers to ensure that this programme is delivered according to the framework set out. The curriculum leader will work with teachers to check that the programme is being delivered appropriately.

Implementation - Teachers have good knowledge of the subject(s) and courses they teach. Leaders provide effective support for those teaching outside their main areas of expertise; Teachers present subject matter clearly, promoting appropriate discussion about the subject matter being taught. They check pupils' understanding systematically, identify misconceptions accurately and provide clear, direct feedback. In so doing, they respond and adapt their teaching as necessary without unnecessarily elaborate or individualised approaches.(Ofsted handbook 2019)

Design and Technology curriculum planning

At St Aidan's Catholic Primary School we use the current National Curriculum as the basis for our curriculum planning in DT. Our long-term and medium-term plans, give **details** of each area to be taught for each term or half term.

It is the DT subject lead's responsibility to ensure children have the opportunity to build upon **prior learning**, which is taught and developed through the whole school progression map for design and technology.

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 increasingly technological world*
- build 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.*

At St Aidan's, we know that children really enjoy this subject and benefit from the creativity that it brings. We also know that effective teaching of this subject requires **expertise** and **knowledge** on the part of the teachers. We commit to engaging with training where available and for the subject leader to remain a point of help and advice.

We approach DT as an **academic subject** and promote the use of a design **process** that allows children to **evaluate their ideas and products**.

Feedback in the sketch book will be positive and formative in developing key skills, knowledge and understanding.

EYFS

In the Early Years Foundation Stage, **design and technology** forms part of the learning children acquire under the '**Knowledge and Understanding of the World**' branch of the Foundation Stage curriculum, which also covers geography, history, ICT, and science.

We encourage creative work within EYFS as this is a part of the Early Years curriculum. We look to introduce, practise and develop these skills by **teaching and modelling** and then encouraging children to apply these skills independently.

Constructing: Learning to construct with a purpose in mind, some children use scissors, glue, string and a hole punch to make a bag to store travel brochures they collected during a field trip.

Structure and joins: Children, for example, make a church tower out of small wooden bricks.

Using a range of tools: Children will learn about planning and adapting initial ideas to make them better. For example, a child might choose to use scissors, a stapler, elastic bands and glue to join bits together to make a toy vehicle. But they might then modify their initial idea by using masking tape.

Cooking techniques: Some children take turns stirring the mixture for a cake and then watch with fascination as it rises while cooking. They will practise stirring, mixing, pouring and blending ingredients during cookery activities.

Exploration: Children will dismantle things and learn about how everyday objects work. For example, a child might dismantle a pepper grinder and discover how it is put together and the materials different parts are made of.

We provide a **rich environment** in which we encourage and value creativity. We give them the opportunity to work independently, within small groups and alongside other adults.

Key Stage 1

When designing and making, pupils should be 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 [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.

Key Stage 2

When designing and making, pupils should be 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 [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

Pupils should be taught to:

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 and varied 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.
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- children or small groups

Impact - Pupils develop detailed knowledge and skills across the curriculum and, as a result, achieve well.

Assessment and recording

We assess the children's work in design and technology whilst observing them working during lessons.

Teachers observe the **progress** made by children against the learning objectives for their lesson and the **quality of the work** produced in recorded work e.g. design/ evaluation books.

The design technology subject leader keeps **evidence** of the children's work in a portfolio. This demonstrates what the **expected level** of achievement is in design, in each year of the school.

We are moving towards a clearer picture of what age related and greater depth will look like in the primary phase.

Resources

We have a **wide range** of resources to support the teaching of design and technology across the school.

Classrooms have a small range of basic resources, but we keep the more specialised equipment in our stock room.

Monitoring and review

Our design technology leader monitors this subject through scrutiny of design books or examples of work for each year group, observing lessons/learning walks and through pupil voice feedback.

This monitoring will reflect the **'deep dive'** methodology applied to other subjects by senior leaders. It is also the responsibility of our design technology leader to support colleagues in the teaching of design technology where and when applicable.