



Design Technology at Holy Name

Design Technology Curriculum Rationale

At Holy Name we are determined that every pupil will have the opportunity to be a design technologist; we do not see background, needs or abilities as insurmountable barriers to learning. We want them to have no limits to what their ambitions are and grow up with the skills to be architects, graphic designers, carpenters and chefs. We believe that all of our children are **STARS** with the potential to shine. The design technology curriculum has been structured so that our children develop their design skills and knowledge (in line with National Curriculum milestones) by building upon prior learning. We want our children to remember their design technology lessons in our school, reaching learning milestones at key points in their school life. We want them to retain knowledge of key skills and vocabulary so that they have a foundation for their continued school life and life beyond school.

Curriculum Intent

The design technology curriculum promotes curiosity and a love of learning. It is rigorous and empowers our children to become independent and resilient – like all curriculum areas.

We want to equip them with not only the minimum statutory requirements of the design technology National Curriculum but to prepare them for the opportunities, responsibilities and experiences of life after Holy Name.

We want our children to use the vibrancy of our great city to learn from other cultures, respect diversity, co-operate with one another and appreciate what they have. These, and other British Values, are placed at the heart of everything we do.

We enrich our pupils' time in our school with memorable experiences and provide opportunities which can be out of reach.



Curriculum Implementation

In September 2021, a complete audit of the design technology curriculum was conducted. On the back of the findings from this audit, the design technology curriculum has been carefully built and the learning opportunities and assessment milestones for each year group crafted to ensure progression and repetition in terms of embedding key learning, knowledge and skills.

Design technology subject specific characteristics, which we expect the children to demonstrate, have been developed and shared with all stakeholders. These characteristics underpin all work in DT and form a focal point for display areas and provide a common subject specific vocabulary for staff and pupils. These characteristics are:

- 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 and passion for the subject and knowledge of, up-to-date technological innovations in materials, products and systems.
- 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.

We empower our staff to organise their own year group curriculums under the guidance of our subject leaders. Teachers are best placed to make these judgements. Staff develop year group specific long-term curriculum maps which identify when the different subjects and topics will be taught across the academic year. All our subjects are taught discretely but staff make meaningful links across subjects. They link prior knowledge to new learning to deepen children's learning. Our short-term plans are produced on a weekly and daily basis. We use these to set out the learning objectives for each lesson, identifying engaging activities and resources which will be used to achieve them.



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In most subject areas, we encourage staff to teach a weekly lesson, however this is not the case for design technology. Following the design technology audit, Each term, the whole-school will take part in a design technology week when each afternoon will be given over to design technology. This helps to ensure that the children see the whole process from start to finish – from the design stage through to their finished product. We believe that by crafting our curriculum this way, we improve the potential for our children to retain what they have been taught, to alter their long-term memory and thus improve the rates of progress they make.

Due to the format of our school year groups (a mixed year class in every key stage) we operate a cycle which ensures all relevant curriculum objectives are taught by the end of key stage 1, lower key stage 2 and upper key stage 2, this ensures that all children have accessed the whole curriculum when they leave our school.

Curriculum Impact

We use summative assessment information in every design technology lesson. Staff use this information to inform their short-term planning and short-term interventions. This helps us provide the best possible support for all of our pupils, including the more able. The assessment milestones for each phase have been carefully mapped out. This means that skills in design technology are progressive and build year on year.

Assessment information is collected frequently and analysed as part of our monitoring cycle. This process provides an accurate and comprehensive understanding of the quality of education in design technology. A comprehensive monitoring cycle is developed at the beginning of each academic year. This identifies when monitoring is undertaken. The last design technology monitoring took place on 12th March 2019. Monitoring in design technology includes: book scrutiny, lesson observations and/or learning walks, pupil/parent and/or staff voice.

All of this information is gathered and reviewed. It is used to inform further curriculum developments and provision is adapted accordingly.



Design Technology programmes of study: Key Stages 1 and 2

Purpose of study

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 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.

Attainment targets

At key points in their school life, pupils are expected to know, apply and understand the matters, skills and processes specified in the relevant programme of study. At Holy Name, we have milestones for foundation stage, key stage 1, lower key stage 2 and upper key stage 2 that we wish every child to aspire to or exceed. These milestones have been selected specifically for our children, to reflect the ethos and culture of Holy Name Catholic Primary School.



Subject content – 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 should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment].

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.



Subject content – 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 should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].

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.



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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.

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.