



Our Lady & St Edward School DT Curriculum

Intent, Implementation and Impact

Children's learning and development is at the heart of all we do.

We appreciate the skills and talents that every individual in our community demonstrates and believe that through establishing strong relationships, all should feel a strong sense of belonging to our school.

Every aspect of the curriculum is valued.

Every moment is a learning opportunity.



Intent (specific to subject)

What is DT?

Design and Technology prepares children to be part of the constantly changing world around them and provide them with skills they can adapt and use in a multitude of contexts. It builds on children's ability to work independently, solve practical and theoretical problems and encourages team work. It supports them to spot opportunities and challenges and encourages them to work to find their own solutions through development of products. Design and Technology builds on practical skills as well as chances to reflect and evaluate, argue and present ideas and explore past, present and future technologies. At its heart, is real life situations, considering the aesthetic, social and environmental implications. Products are designed for a consumer, for a purpose.

DT in the National Curriculum

National curriculum Aims

The national curriculum for Design and Technology aims to ensure that all pupils:

- Develop the creative, technical and practical expertise need 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.

National Curriculum requirements at 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, (or 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.

National Curriculum requirements for food and Nutrition at KS1

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:

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

National Curriculum requirements at 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, such as 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 as gears, pulleys, cams, levers and linkages)
- understand and use electrical systems in their products, (for example series circuits incorporating switches, bulbs, buzzers and motors)
- To apply their understanding of computing to programme, monitor and control their products.

National Curriculum requirements for food and nutrition at KS2

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:

- 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
- To understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

What does DT look like around school?

Central to Design and Technology is the design, production and evaluation of products. A product is something made with a purpose that can be used for the intended function. From EYFS to Year 6 the children work with ingredients (sweet and savoury), mechanisms, textiles, structures and electrical systems. The products they are producing are linked to either their class topic, science focus or something happening in the world around them. They will have 6 hours of DT each term and the learning goals are focused around the design, make and evaluate process.

DT in Early Years

In Early Years, the children learn the skills and vocabulary needed as foundations to their DT learning. Their projects focus around their current theme. They start to work with a range of materials and how to use classroom tools safely. They are encouraged to design and explore their ideas. They learn basic organisational skills and work independently and in teams. They have a class project book which they reflect on each time they start a project.

Impact of DT

Assessment is completed by the class teacher each lesson and feedback is given both verbally and written pieces are marked. In KS1 and KS2, children are given opportunities to peer assess, offering useful feedback to each other in order to improve products. This assessment is used to inform what differentiation is needed and identify children who may need further support or challenge.

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

How are children with SEN supported?

The Association for DT suggests that children with SEN make great progress with DT due to its practical activities and that finding solutions gives children's work a sense of purpose. Children with SEN are supported with their work by adapting the recording or production of tasks to meet their ability. If required, there is additional adult support from the class teacher or the teaching assistant to complete tasks. Differentiation is encouraged as well as the use of images on instructions. Children with higher level needs are encouraged to practice skills such as threading, use of adhesives, using scissors, baking/cutting/ decorating foods as well as communication skills are promoted in small group interactive sessions which take place daily in the afternoons.

What will this look like?

By the time children leave our school they will:

- have a good understanding of the design, make and evaluate process
- Be knowledgeable about the world of technology, including industries in our local area.
- Be confident to explore ingredients and flavours which allows them to explore different cultural foods and develop life-long healthy relationships with food.
- Have a commitment to projects and be able to carry out the process independently or as part of a team.
- Be proud to share unique and innovative ideas with others.
- Understand their impact on the world as people and as designers. They will be reflective and conscious in material or ingredient choices.
- Apply a range of skills learnt across the curriculum including maths, literacy, science and ICT.
- Be able to identify risks and assess how they can avoid them.
- Have a passion for DT and see their future as part of a changing world.

Implementation – sequential, progressive planning national curriculum, knowledge organisers, retrieval, reading, vocabulary, oracy, wider opportunities eg Partake, visits, monitoring pupil voice, books, visits, environment

As a starting point, we ensured that progression was seen in the understanding of the design, make and evaluate process. At the recent DPS visit (2022) we were encouraged to break down the focus onto skills e.g. mechanisms, electrical etc and ensure this was being revisited yearly. With a busy curriculum, we decided that we would revisit key skills every two years.

I have been starting to develop retrieval practice activities that can be used between topics.

We encourage oracy through the purple success criteria where we practice the skills in every lesson, including Design Technology.

We have been monitoring once a term to see how classes are progressing.

Some classes e.g. year 1 are displaying key vocabulary but all classes' display pupils' work for some time after the project is finished.

DT has its own books that will be taken with them through the year groups so they can reflect on previous projects.

Impact – outcomes based on monitoring

When completing pupil voice children are able to explain what “design, make, evaluate” mean though they are not always confident to explain why these processes are important in the process. We have worked to moving away from re-creating things from history/ geography/ art and looking more at making a product for a purpose. This term, we are starting to use the projects on a page when appropriate which encourages the concept of original designs for purpose.

To improve the vocabulary use, Subject lead is currently creating vocab, skill and LO tables which links the skills that need to be practiced and links the appropriate vocabulary to the context.

We measure the impact of our curriculum through the following methods:

- Assessing children's understanding of a topic before and after the unit is taught, through retrieval practice activities (being developed this year).
- Summative assessment of pupil discussions about their learning and during oracy opportunities throughout the DT lessons.
- Images (photographs) of the children's practical work.
- Interviewing the pupils about their learning (pupil voice).
- Moderation staff meetings where pupil's books are scrutinised and there is the opportunity for a dialogue between teachers to understand their class's work.
- Marking of written work in books against the success criteria (by adults and pupils) when appropriate

Recent book scrutinizes have revealed that DT is starting to be taught more consistently however, teachers are struggling to find time to do it in the depth and detail it needs. Classes are behind on projects and are having to build in additional lessons this term to catch up.