

DT Curriculum Intent, Implementation and Impact 2022-2023



Intent

The intent is to create a curriculum that is based on real life experiences encouraging children to ask big questions about their world. That they learn to grow as artists, historians, musicians, designers, coders, scientists, writers, readers, mathematicians...and flourish as lifelong creative thinkers. The curriculum serves the needs of the children, building courage, compassion and independence to be a champion for what they believe in. They are courageous advocates for themselves and others in the local and global community. Design and Technology prepares children to deal with tomorrow's rapidly changing world. It encourages children to become independent, creative problem solvers and thinkers as individuals and part of a team. It enables them to identify needs and opportunities and to respond to them by developing a range of ideas and by making products and systems. Through the study of Design and Technology, they combine practical skills with an understanding of aesthetic, social and environmental issues, as well as functions and industry. This allows them to reflect on and evaluate past and present technology, its uses and impacts. Understanding the process of Design Technology enables our children to believe they can make a difference in the world.

What DT looks like in our School:

- Inspiring and challenging lessons
- Opportunities to explore and experiment
- Children working independently and in groups
- Opportunities for critical thinking and discussion

- Exciting and creative lessons linked to our topics
- Cross curricular and discrete lessons
- Creative work, exploring ideas and recording experiences
- Children who are becoming independent in researching, designing, evaluating a range of products, understanding the importance of this product
- Children who are able to use tools proficiently and safely

By the end of EYFS pupils will:

During the EYFS pupils explore and use a variety of media and materials through a combination of child initiated and adult directed activities. They have the opportunities to learn to:

- Use what they have learnt about media and materials in original ways, thinking about form, function and purpose
- Use different media and materials to express their own ideas
- Make plans and construct with a purpose in mind using a variety of resources
- Develop skills to use simple tools and techniques appropriately, effectively and safely
- Select appropriate resources for a product and adapt their work where necessary
- Cook and prepare food adhering to good health and hygiene routines

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By the end of 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).

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 e.g. 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
- 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.

Food 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.

By the end of Key Stage 2:

Within key stage 2 key events and individuals that have influenced the world of Design Technology are teaching focuses that are to be covered.

The use of computer programmes and applications are also a key focus to be utilised by children in their design of their products.

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,

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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.

Food and Nutrition

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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.

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Implementation

This is how it works:

- Lesson provided through cross curricular or discrete lessons
- Clear progression of skills developed throughout school
- Progression of knowledge developed each year
- Children will have had the opportunity to use a range of good quality tools and resources and develop competency in using them safely
- Opportunities to investigate the work of real-life designers
- Workshops and technology days that bring topics to life

This is what adults do:

- Teachers and phase teams work collaboratively to support each other in the teaching of design technology, understanding and applying current developments in the subject, and providing direction for the subject in the school.
- Teachers who show enthusiasm for the subject regardless of personal capabilities.
- Curriculum leader evaluates the strengths and weaknesses in the subject and indicate areas for further improvement.
- Create a positive learning environment to encourage discussion and personal opinion.
- Ensure a safe working environment
- Look for opportunities to use specialists and outside providers when necessary

This is how we support, challenge and ensure all children can access the curriculum:

Our Christian vision challenges all subject leaders to reflect on ensuring that the English curriculum helps all pupils to belong and access learning, appropriate to their needs and abilities. Inclusion and *belonging* is a thread that runs through every area of the school enhanced by collaboration between senior leaders, subject leaders, the SENCO, class teachers, support staff, external agencies, parents and most importantly, the child. At Canon Pyon Church of England Academy, every teacher is a teacher of SEND and every leader is a leader of SEND.

Special Educational Needs and Disability (SEND)- Including the Lowest 20% of Learners

We firmly believe that *Quality First Teaching* is the solid foundation on which effective SEND provision is built. The first step to children having access to a broad and balanced English curriculum is through

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appropriate differentiation by skilled and nurturing teaching staff, who have ambitious expectations of their own teaching and students' learning. Differentiation is not a simply case of providing different worksheets, for example. Differentiation is adapting the work, success criteria or support given to help children achieve or make progress.

Differentiation- or adaptations- may include:

- Alternative tasks
- Different objectives or goals within a task
- Resources or learning aids
- Amount of adult support within a task
- Frequency of monitoring within a session
- Time given to complete tasks
- Style of language used
- Style of questioning used
- Use of peer support
- Classroom organisation and grouping
- Level or style of feedback given

Differentiation takes many forms to help learners to *belong* within lessons, *believe* in their ability and *behave* in a way that applies their skills. Further support to help inclusion and overall pupil progress in this subject area may include:

- Targeted intervention programmes, which have a proven and measurable impact on progress.
- Have specific 1:1 or small group intervention, including support from Learning Mentor
- Celebration of achievement, as well as attainment
- Time given, as appropriate, to any emotional or behavioural support that may-in turn- be barriers to learning in this subject area
- Monitor pupil attitudes to subject and using pupil voice to ensure that learners have ownership of subject area/tasks
- Specific enrichment activities, visits or events planned/attended in order to suit the needs and interests of specific groups of learners
- Pupil progress meetings, involving the pupil(s) and any relevant adults
- Data analysis, whether this is quantitative performance data from tests, for example, or qualitative data from questionnaires or monitoring observations
- The provision of good quality and relevant training for all staff members.

Other Pupil Groups- Including More Able and Talented (MAT) and the Highest 20% of Learners

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We believe that all children have individual gifts, interests and talents. Some children may exhibit a skill that is advanced in comparison to their peers. As a result, such pupils will require a higher level of challenge in order for them to *belong*, be included within English sessions and have their needs met. More able and talented pupils (MAT) will also receive differentiation and support appropriate to their needs.

Adapting tasks and providing opportunities to help all children to achieve well will also depend on the diversity of the groups of learners that are represented at Canon Pyon Church of England Academy.

Groupings of learners that could identify trends, spikes or dips in overall progress may include:

- Forces children
- Gender
- Behavioral needs
- Children with emotional needs
- EAL children
- Age (i.e summer born)
- Attendance
- Family support
- LAC
- Ethnicity
- Those experiencing tragedy or loss
- Low self-esteem

This list is not exhaustive and neither are the methods mentioned in how learners can be catered for in this subject area. We are a listening school and are constantly reflecting on feedback from adults and children, with the constant goal of helping all learners.

This is how DT contributes to the spiritual, moral, social and cultural development of the child:

Creating and designing products can sometimes be a moving and even spiritual experience. We encourage children to reflect on the important effect that DT has on people's moods, senses and quality of life. Children at Canon Pyon CE Primary School have the opportunity to encounter art from many cultures and, through their growing knowledge and understanding of DT, they develop more positive attitudes towards other cultures and societies.

Cultural Capital:

Through our teaching of Design Technology at Canon Pyon children have the opportunity to develop their knowledge of how technology has helped the human race in the past, present and future. They will value the importance of design and technology and

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believe that their ideas can make a difference in the world. As a small rural school we have a responsibility to ensure children can access science museums, online design websites, have the opportunity to meet designers via video call and through aspiration days. Children will leave the school knowing that they can make a difference in the world.



Impact

This is what you might typically see:

- Happy, engaged and communicative learners
- Curious children who ask questions, take risks and participate in discussions
- A range of lessons including practical, creative and project-based learning
- Displays showcasing our own language heritage
- Confident children who are willing to communicate
- Children developing their own cultural capital with a growing awareness of their place in the local, national and international community

This is how we know how well our children are doing:

- Informal judgements based on observation during lessons.
- End of term assessments
- Pupil Voice
- Annual assessments in line with the National Curriculum in England 2014
- Summative assessment discussed during transition meeting with next class teacher