

Design Technology Policy



Believe Enjoy Succeed Together
"I can do everything through God who gives me strength"
Philippians 4:13

Cronton CE Primary School

The KEYS Curriculum

Knowledge and skills

Empower

You to

Succeed

Keys To Success

 Knowledge  Skills  Vocabulary



KEYS Curriculum

KEYS Curriculum

At Cronton CE Primary School our KEYS Curriculum is built around the National Curriculum, enriched to reflect the children and community we teach in. As a church school our Christian ethos and school values are the heart of everything we do. We believe every child can be their BEST. With our Vision statement reflecting this.

“I can do everything through God who gives me strength” Philippians 4:13

Curriculum Intent

Our Curriculum has been designed by Cronton CE to provide a bespoke, unique and exciting curriculum that is tailor-made to suit our children, their learning and their futures. Every child is unique and important. They are at the centre of their learning; starting as part of a class, whole school, the local community and then on to their future role in modern Britain and as a future global citizen. Our KEYS curriculum develops each child and the understanding that **Knowledge and skills Empower You to Succeed**.

We maintain a broad and balanced approach to our curriculum, which alongside English and Mathematics will provide our children with skills, knowledge and vocabulary rich experiences that excite and engage. We will foster attitudes and qualities which will enable them to become confident, caring, respectful and responsible citizens. We offer a spiritual, moral, social and cultural experience for all through our curriculum and also through extra-curricular clubs and activities, day trips and residential trips away. Our curriculum delivers sequenced learning to ensure it will build upon what children already know to give them powerful knowledge and skills and make relevant links.

Our curriculum ensures that all children receive quality first teaching for every subject with the highest of expectation for all. We provide a quality education that is inclusive and equips our children to be lifelong learners. We use a wide variety of resources to assist us in delivering this bespoke curriculum including specialist teachers, visits and curriculum enhancement weeks and ensure links and relationships are meaningful to them. We deliver this through our Values Curriculum, Core Curriculum and our Foundation Curriculum.

“Design is a funny word. Some people think design means how it looks. But of course, if you look deeper, it's really how it works.”

Steve Jobs

Intent

DT is a vital part of our KEYS curriculum (Knowledge and Skills Empower You to Succeed). It provides children with a real life context for learning. Through the DT curriculum, children will learn about engineers, designers, chefs and architects to enable them to create a range of structures, mechanisms, textiles, electrical systems and food products with a real life purpose. Design Technology is a Foundation subject within the National Curriculum and as such Cronton C.E. Primary school follows the programmes of study across the school.

The National Curriculum for Design 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



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- 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 Cronton C.E. Primary the Design Technology curriculum is intended to develop:

- Children's understanding of the need for a criteria for a product, through examining and exploring working models where possible.
- Children's understanding of how key events and individuals have helped shape design and technology globally.
- Children's understanding of and abilities in the process used to take a product from initial design to finished article.

It is designed to build upon children's previous knowledge, experiences and skills to enable them to reach their full potential.

Attributes of a Good Designer at Cronton:

- Curiosity about everyday items and a willingness to explore their purpose and how they are made.
- Collaborative and co-operative
- Design from observation, memory and imagination.
- Knowledge and skills to select and use materials, processes and techniques they have learned and develop them further.
- Independence, initiative and originality in their approach to their work.
- Knowledge and understanding of other designers, including those from our heritage, from periods of history and those that are contemporary.
- Mathematician
- Reflective, analytic and able to critically evaluate their own work and that of others.

Implementation

The Primary National Curriculum sets out the following requirements.

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



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- 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

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

At Cronton C.E. these expectations are implemented in the following ways.

- Skills and knowledge are developed throughout each DT topic and are mapped across the school to ensure progression.



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- Across Key Stage One, Lower Key Stage Two and Upper Key Stage Two, the children will have the opportunity to develop their creative knowledge and skills in investigating mechanisms, structures, techniques with textiles and food technology.

Units in Design Technology are taught through a sequence of six hourly discreet lessons over half a term. The sequence of lessons will include

- Key knowledge on the background of the unit to be studied. This enables links to other curriculum areas, such as history and geography, with children developing their knowledge of DT from different historical periods and of famous individuals within this curriculum area.
- Key vocabulary related to the unit studied.
- Exploration of existing products and working examples.
- **Design:** Design should be rooted in real life, relevant contexts to give meaning to the learning. Designs should be planned through appropriate formats: drawing, templates, talking and mock-ups.
- **Make:** Children should be given a range of tools for their projects to choose from and the **technical skills and knowledge** to use them appropriately, safely and effectively. They should use a wide range of materials and components; textiles, construction equipment and ingredients.
- **Evaluate:** Children should be taught to evaluate existing products and their own products against design criteria.

The children practise and develop mastery in the key processes required in creating mechanisms, structures and food items and develop their confidence.

- Teachers will use a variety of modes of working depending on the task - independent, group or class.
- There is no specialist teaching as Design Technology is taught by class teachers.
- Classroom assistants are used to assist teachers where available, having had training and briefing by the individual teacher prior to the lesson.
- Design Technology is a subject that lends itself easily to equal opportunities and children with special needs are catered for by the adaptation of the work when necessary, to ensure full participation. Reference may also be made to the Equal Opportunities and Special Needs policies.
- The children's knowledge and understanding of some other cultures is enhanced through some aspects of the Design Technology Curriculum, linking where possible to other aspects of their studies.
- Design Technology is not generally given as a homework subject, but there may be occasions when the class teacher feels it is appropriate. (Refer to Homework Policy.)
- The emphasis on Design Technology teaching is on first hand experience and we encourage children to increasingly take control of their own learning.
- It is the responsibility of the classroom teacher to ensure the correct procedures with regard to health and safety with the children and equipment.
- Health and safety should be taught to the children as an integrated part of their learning.

Impact

Attainment targets



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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.

Impact at Cronton C.E. Primary

- Assessment in Design Technology needs to pay regard to children's progress in knowledge, the use of materials, tools, reference resources and evaluation of their own work as well as others.
- Within each unit, each lesson has clear objectives which are shared with the children. At the end of each unit the children are assessed against the objectives for the unit and said to be working below, working at or working above by the class teacher. This is recorded on a class evaluation sheet which is passed on to the subject lead.

The subject lead will use this information to:

- Gain an understanding of progress and attainment across year groups and each Key Stage.
- Any needs for further resourcing.
- Identify any staff CPD requirements.

Children's progress is reported to parents twice annually through the parent teacher meetings and the written report.

Classroom displays reflect the children's sense of pride in their Design Technology work and this is also demonstrated by creative outcomes across the wider curriculum.

Children experience the satisfaction of following a design process through to having a working, finished product. Children will know more, remember more and understand more about Design Technology. The large majority of children will achieve age related expectations in Design Technology. As designers children will develop skills and attributes they can use beyond school and into adulthood. The DT curriculum at Cronton C.E. contributes to children's personal development in creativity, independence, judgement and self-reflection.

Marking

Marking of children's work is essential to ensure they make further progress. Work is marked in line with the school marking policy. Children are given time to read teachers' comments and make corrections or improvements in the review section. Responses to marking are made as close to the work as possible, ideally at the start of the next lesson. Some pieces of work in Design Technology can be marked by children themselves, with support and guidance from the teacher.

Please see Appendix 3

Further Subject Lead Responsibilities

- Monitor continuity and progression. This will be achieved through classroom observation, reading planning files and looking at work produced by the children in accordance with the school's monitoring cycle.
- Ensuring the stocks of both consumables and non- consumables are replenished as necessary. Class teachers are responsible for ordering those that will remain in their own classrooms.
- Ensure they have an up to date knowledge of Design Technology education and disseminate information to colleagues as necessary.

Appendix



KEYS Curriculum

1. Long Term Design Technology Plan
2. Progression of Skills
3. Design Technology Marking Policy