



## Cranborne

Church of England  
First School and Nursery

*Love, Learn, Fly*

Do Everything in Love 1 Corinthians 16:14

## Design and Technology at Cranborne First School and Nursery

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, children 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. It is the intent of Cranborne First for Design and Technology to be taught in all classes through at least one age appropriate topic per term.

At Cranborne CE First School and Nursery, we follow the 'design, make, evaluate' approach to the teaching of DT, as outlined in the National Curriculum Programme of Study. At the beginning of each project, the children are given opportunities to explore existing products and their components, which helps to inform the design stage of their project. During the design stage, they will devise their own design criteria, be encouraged to draw detailed designs and make prototypes where appropriate. Whilst making their products, staff will guide them through the technical skills they will require, modelling good practice and highlighted safety considerations with the children. Through the evaluation stage, the children are encouraged to reflect upon their final products against their original design criteria, considering the views of others and how they could have altered their design or techniques to impact the overall appearance and successfulness of their product.

### Curriculum Drivers

	In all subjects...	In D&T, this looks like...
<b>Curiosity</b>	Curiosity is an eagerness to learn or know and being confident in asking questions and researching. This approach to learning enables inquisitive thinking such as exploration, investigation and learning and nurtures future problem solvers.	Becoming confident when using a range of materials Having fantastic Design and Technology opportunities Creating products which are usable and celebrated

<p><b>Communication</b></p>	<p>We believe that language is the tool that unlocks opportunities and enables children to share ideas effectively. We want our children to speak with clarity, confidence and eloquence, connecting the words they know (vocabulary) with what they know (knowledge) therefore becoming effective communicators. We know that vocabulary development and the ability to read fluently are key to life-long success and this is our intent for every child.</p>	<p>Taught specific design and technology vocabulary. Learning to talk about design and products – evaluation and analysing theories. Expressing their thoughts and opinions on their work of others.</p>
<p><b>Resilience</b></p>	<p>Resilience means having the skills and resources to deal with challenges and barriers. Resilience is a measure of how much you want something and how much you are willing and able, to overcome obstacles to get it. Our children will develop the emotional and physical security needed to become resilient individuals who are able to take risks and deal with different challenges across the curriculum and in the wider world by thinking positively and having the confidence to 'have a go'. Resilience means having the skills and resources to deal with challenges and barriers. Resilience is a measure of how much you want something and how much you are willing and able, to overcome obstacles to get it. Our children will develop the emotional and physical security needed to become resilient individuals who are able to take risks and deal with different challenges across the curriculum and in the wider world by thinking positively and having the confidence to 'have a go'.</p>	<p>Developing a growth mind-set and resilience. Taking part in designing products that solve real and relevant problems within a variety of contexts. Taking creative risks, operating outside their 'comfort zone,' learning from mistakes and daring to do things differently when making design decisions. Generating strategies when taking risks.</p>
<p><b>Independence</b></p>	<p>Independence is the ability to live your life to the full, confidently and to be self-sufficient. We aim to promote our children's independence and develop a commitment to learning and self-improvement, both inside and outside of the school environment. We will give our children opportunities to organise themselves, show personal responsibility, initiative, creativity and enterprise. We will nurture our children's awareness that actions have consequences and to make choices based on this</p>	<p>Critical of their own work and that of others, making evaluations, practising their skills in a constant effort to do their best. Being original, imaginative, creative and taking risks for a purpose.</p>

	awareness, understanding that they have ownership of their actions.	
<b>Aspiration</b>	<p>Aspiration is the hope, desire or ambition to strive to achieve something. To be the best they can possibly be and to challenge themselves as a learner. The development of aspirations encourages children to produce work of high quality, take pride in themselves and be the very best they can be.</p> <p>Aspiration is the hope, desire or ambition to strive to achieve something. To be the best they can possibly be and to challenge themselves as a learner. The development of aspirations encourages children to produce work of high quality, take pride in themselves and be the very best they can be.</p>	<p>Having opportunities to look at designers from all over the world for children to aspire to.</p> <p>Taking part in creative and engaging activities to create a purposeful final product.</p> <p>Recognising opportunities, taking the initiative and setting up a new venture.</p>

Learning knowledge is not an end point in itself, it is springboard to learning more knowledge. Each unit in our overview is underpinned by rich, substantive knowledge and ambitious vocabulary, whilst also ensuring children are developing their disciplinary knowledge (DT skills). Each unit of work is planned carefully to ensure concepts are taught in optimal order to support children's understanding. As well as developing a breadth of subject knowledge, we want our children to develop subject specific skills. In addition to substantive and disciplinary knowledge, children will develop their experiential knowledge through carefully planned enrichment activities.

	<b>EYFS</b>	<b>Year 1 and 2</b>	<b>Year 3 and 4</b>
<b>Cycle 1</b>	Food -Healthy Eating Mechanisms – hinges and catches Textiles – joining techniques Joining of materials	Textiles – Puppets Mechanisms – Sliders and Levers. Food – Healthy Eating	Textiles – Bendy bags Mechanical systems – moving history book. Food preparation – Healthy Eating
<b>Cycle 2</b>	Design - Let's look at products Clothing design for different purposes – cold, wet etc Joining of materials Design - Let's look at products Mechanisms - wheels Freestanding Structures	Mechanisms – Toys Food – Healthy Eating Freestanding Structures	Food – Preparing food - Making a healthy sandwich Electrical systems – Night Light Shell Structures – Desk Tidy.

## Substantive Concepts – these are the concepts that give a subject substance or content

We have identified a set of key substantive concepts that children will relatedly revisit throughout their learning journey at Cranborne CE First School and Nursery.

<p style="text-align: center;"><b>Designing</b></p> <p>The initial stage in the creation of a product. To design purposeful, functional, appealing products for themselves and other users based on design criteria.</p> <p>To generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</p>	<p style="text-align: center;"><b>Making</b></p> <p>The stage following design. A step by step process to complete a design using identified resources.</p>	<p style="text-align: center;"><b>Evaluating</b></p> <p>The ability to critique a product and suggest how the product has met the design brief and how it might be improved.</p>
<p style="text-align: center;"><b>Technical Knowledge</b></p> <p>Technical skills refer to the specialised knowledge and expertise needed to accomplish complex actions, tasks and processes relating to technology.</p>	<p style="text-align: center;"><b>Cooking and Nutrition</b></p> <p>The key food groups and how these impact on health. The important parts of a balanced diet and which foods contribute toward this.</p>	

## Second Order Concepts – Shape the Enquiry

<p style="text-align: center;"><b>Responsibility</b></p> <p>Working safely, how design can solve problems, choosing the righty materials, responsibilities to customers to ensure quality/reliable products, healthy eating, quality ingredients.</p>	<p style="text-align: center;"><b>Function</b></p> <p>The purpose of a product that has been designed and made with this in mind.</p>	<p style="text-align: center;"><b>Product</b></p> <p>The end of the design and making process.</p>
<p style="text-align: center;"><b>Innovation</b></p> <p>The process of design stages including prototypes that evolve based on identified strengths and weaknesses and in response to consumer and customer need.</p>	<p style="text-align: center;"><b>Structure</b></p> <p>To know different types of structure and the decisions that are made when designing these, including how they are constructed to be fit for purpose.</p>	<p style="text-align: center;"><b>Mechanism</b></p> <p>Cams, levers, wheels, axles that are applied to different uses to provide movement. Pneumatics may be explored.</p>

<p><b>Aesthetic</b> How a product is made attractive to a user or consumer.</p>	<p><b>Cause and Consequence</b> Identifying how things work, how an action can cause change/movement.</p>	<p><b>Significance</b> Significate designers and designs, real world examples of effective and successful products.</p>
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