

# CANTRELL PRIMARY AND NURSERY SCHOOL



## DESIGN & TECHNOLOGY POLICY

January 2022

## Introduction - What is Design & Technology?

At its heart, Design and Technology (D&T) is designing something for somebody for some purpose. This simple mantra underpins our approach to this inspiring and practical subject at Cantrell Primary School. D&T as a discipline gives children the skills and knowledge to design and make relevant products within a variety of contexts, considering their own and others' needs, wants and values. Children learn how products and systems are designed and manufactured to inform their own creations, as well as developing an understanding of sustainability and higher order skills such as problem-solving.

## Aims

We are currently in an exciting phase of our D&T journey where we are developing our vision for this creative subject. With our new D&T curriculum offer, our children will:

- Develop an understanding of how existing (and past) products and systems are designed and manufactured through disassembly and evaluation;
- Be able to design and make a range of practical products using relevant and real-life problems and scenarios;
- Use a range of tools, materials and components safely and effectively;
- Harness digital technologies during the design and make process;
- Develop food preparation and cooking techniques, aligned with a knowledge of healthy eating and sustainable food production;
- Develop skills as creative problem-solvers and risk-takers as individuals and within a team;
- Develop an ability to critically evaluate their own products and those of others, as part of an iterative design process.

## Our intent

Our Design and Technology Curriculum sets out the knowledge component of our curriculum intent, based around the units set out in the National Curriculum. The skills that we want our pupils to develop through our curriculum are outlined in our Progression Map of Design & Technology skills. Our expectation is that skills and knowledge are developed cumulatively across key stages, building on our children's experiences in Foundation Stage (e.g. through healthy eating, constructing and using tools and techniques).

## Implementation

Our topic overview outlines the topics that will be taught in each year group.

	Autumn	Spring	Summer
Year 1	<b>Mechanisms</b> Sliders and levers (Christmas cards)	<b>Food</b> Preparing fruit and vegetables (Fruit salad) <b>Textiles</b> Templates and joining techniques (Superhero cape)	<b>Structures</b> Freestanding structures (Castles)
Year 2	<b>Textiles</b> Templates and joining techniques (Sewing puppets)	<b>Mechanisms</b> Wheels and axles (Fire engines/emergency vehicles)	<b>Food</b> Preparing fruit and vegetables (Salad)
Year 3	<b>Mechanical systems</b> Levers and linkages (Pop-up story book)	<b>Textiles</b> 2D shape to 3D product (Soft toy sea creature)	<b>Food</b> Healthy and varied diet (Sandwich and salad)
Year 4	<b>Electrical systems</b> Simple circuits and switches/ Simple programming and control (Torches)	<b>Structures</b> Shell structures with CAD (Easter treat box)	<b>Food</b> Healthy and varied diet (Picnic food)

<b>Year 5</b>	<b>Food</b> Celebrating culture and seasonality (Healthy biscuits)	<b>Mechanical systems</b> Cams (Life cycle)	<b>Textiles</b> Combining different fabric shapes with CAD (Utility bag)
<b>Year 6</b>		<b>Structures</b> Frame structures (Bird hides/boxes) <b>Food</b> Celebrating culture and seasonality (Bread-making)	<b>Electrical systems</b> More complex switches and circuits/ Monitoring and control (Games)

Underpinning our D&T learning are the six interrelated principles of user, purpose, innovation, authenticity, functionality and design decisions. Each project will usually (but not necessarily) include Investigative and Evaluative Activities (IEAs); Focused Tasks (FTs); and a Design, Make and Evaluate Assignment (DMEA).

### **Recording, assessment and monitoring**

Given that D&T is a creative subject, our expectation is that children's responses to briefs will look different from each other, particularly as they move up through the school. While the final product is therefore of value as an assessment tool, capturing the individual's thought processes and iterations of design ideas is also important. D&T learning will be captured mainly in our sketchbooks, using a variety of methods (e.g. photographs, sketches, diagrams, pictures, worksheets, written explanations, reflections, ICT etc).

We will monitor the implementation of our new curriculum by carrying out termly work scrutiny of sketchbooks, exemplars of children's work and pupil interviews. As part of this, we will assess our pupils' understanding of the 'Key factual learning' set out in our curriculum. The subject leader will also undertake lesson observations and contribute to an annual D&T 'Deep dive' day. She will also write a 'Termly Impact Statement', highlighting areas of positive impact and next steps for action, as part of the school's improvement plan.

### **Managing resources**

Classrooms have a range of basic resources, with the more specialised equipment kept in the D&T cupboard in the annexe. Cooking equipment is kept in the staff room.

### **Health and safety**

Direct safety instructions will be given to children each time they undertake a design and technology activity. All teaching staff will teach and model the safe use of tools and equipment along with food safety and hygiene and insist upon good practice. Children will be supervised in their use of tools and equipment at all times. Glue guns will be used by Key Stage 2 children under direct supervision. Food safety procedures will be followed when preparing for food activities. Staff will ensure that allergies and permissions are planned for before any food items are used (lactose-intolerant/vegan/allergens etc), in line with Natasha's Law.

### **Role of D&T lead**

The subject leader will monitor the teaching and learning of D&T across the school, ensuring a high quality, broad and stimulating curriculum. The leader will also:

- Keep up to date with developments in D&T;
- Identify gaps in knowledge and skills within staff team (including in herself);
- Plan and deliver effective CPD for staff; and
- Be responsible for coordinating the acquisition and management of resources.