



Design and Technology at Coldfall

"Design is not just what it looks like and feels like. Design is how it works."

-- Steve Jobs, co-founder of Apple, Inc.

"Design is not a single object or dimension. Design is messy and complex."

-- Natasha Jen, designer and educator

Intent

Why do we teach this?

Design and Technology is about providing opportunities for children to develop their capability. By combining their design and making skills with knowledge and understanding, they learn to create quality products.

Design and Technology is often one of a child's favourite subjects. Children like making decisions for themselves and doing practical work. They love creating products they can see, touch – and even taste – for themselves. They feel proud to have done so.

Design and Technology brings learning to life. It is a motivating context for discovering literacy, mathematics, science, art, PSHE and ICT. Primary Design and Technology also provides a firm basis for later learning in the subject and a platform for developing skills in literacy and numeracy.

Design and Technology is taught to develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. Design and Technology provides meaningful activity to solve real problems with real solutions.

Implementation

What do we teach? What does it look like?

Design and Technology at Coldfall develops children's skills and knowledge in design, structures, mechanisms, electrical control and a range of materials, including food. It encourages children's creativity and encourages them to think about important issues.

Design and Technology education involves two important elements - learning about the designed and made world and how things work, and learning to design and make functional products for particular purposes and users. Children acquire and apply knowledge and understanding of materials and components, mechanisms and control systems, structures, existing products, quality and health and safety.

The skills learned in Design and Technology also help with learning across the curriculum. Knowledge about the properties of materials helps in science and the practice of measuring accurately helps in maths. These skills help in computing through the children's use of computer control and, naturally, in art and design.

Design and Technology education helps develop children's skills through collaborative working and problem-solving, and knowledge in design, materials, structures, mechanisms and electrical control. They are encouraged to be creative and innovative, and are actively encouraged to think about important issues such as sustainability and enterprise.

There are three core activities children engage with in Design and Technology:

- Activities which involve investigating and evaluating existing products
- Focused tasks in which children develop particular aspects of knowledge and skills
- Designing and making activities in which children design and make 'something' for 'somebody' for 'some purpose'

These three activities are combined in sequence to create a Design and Technology project.

Where? and when?

<u>Year Group</u>	<u>Autumn 1</u>	<u>Autumn 2</u>	<u>Spring 1</u>	<u>Spring 2</u>	<u>Summer 1</u>	<u>Summer 2</u>
<u>N</u>	Junk modelling Design and Make table	Junk modelling Design and Make table	Junk modelling Design and Make table	Junk modelling Design and Make table	Junk modelling Design and Make table	Junk modelling Design and Make table
<u>R</u>	Junk modelling Sandwich making	Junk modelling Design and create an instrument Playing with electrical circuits	Junk modelling Space theme – telescope/planets/rockets	Junk modelling Sandwich making Design binoculars Design a bird house	Junk modelling Underwater theme – boat/floating device Making fruit/veg salad	Junk modelling Dinosaur theme – pop-up/slider cards Creating 3D shapes with nets Making fruit/veg salad
<u>1</u>	Textiles-Product: Sock Puppet		Structures-Freestanding structures Product: A bridge for the Billy Goat's Gruff			Food-Preparing fruits and vegetables Product: Cold drinks (Healthy milkshakes or smoothies)
<u>2</u>	Food-Preparing fruits and vegetables Product: A fruit salad.	Mechanisms-Sliders and Levers Product: A moving picture or book featuring a slider or a lever.			Mechanisms-Wheels and Axles Product: Pull along vehicle. User: Younger children.	
<u>3</u>		Textiles- 2D shape to 3D product Product: Money purse/wallet to be sold in a Lake District Gift Shop			Structures-Shell Structures Product: Keep safe boxes	Food- Healthy and Varied Diet Product: Sandwiches for a picnic.
<u>4</u>	Food-Healthy and Varied Diet Product: A healthy Mac N Cheese			Mechanical Systems-Levers and Linkages Product: Picture book with levers and linkages about rainforests.	Electrical Systems Simple circuits and systems. Product: Nightlight	

5	Structures- Frame Structures Product: Wooden picture frames.		Textiles: Combining different fabric shapes. Product: Slippers			Food- Celebrating Culture and Seasonality Product: Pizzas User: Themselves and Families
6	Mechanical Systems Product: Electric cars. User: Themselves				Food- Celebrating Culture and Seasonality Product: Jamaican patties	Electrical systems- More Complex switches and circuits. Product: Steady Hand Game

Impact

What will this look like?

It is our aim that when children leave the school, they have built a repertoire of knowledge, and have the skills needed to design and make high-quality prototypes and products for a wide range of users. We hope to equip children with the ability to critique, evaluate and test their ideas and products and the work of others. Children should have learnt how to cook a range of sweet and savoury dishes and should be able to understand the principles of nutrition and healthy eating.