

Design Technology Curriculum



Cooperative
Education East

Aims of Design Technology at the Cooperative Education East Trust

Please refer to our Curriculum and Rationale document which can be found on our schools' websites.

<https://banham.cee.coop/>, <https://bunwell.cee.coop/>, <https://thompson.cee.coop/>

At the Cooperative Education East Trust, we value Design Technology (DT) as an important part of the children's entitlement to a broad and balanced curriculum. DT allows children to solve problems, think creatively and develop ideas.

Our Design Technology curriculum inspires creativity and imagination. Children are encouraged to consider real life problems; designing, making and evaluating products considering product, purpose and user. We aim to inspire pupils to be innovative and creative things who have an appreciation for the products they design and evaluate. Through our curriculum, we provide opportunities for our children to research past and present designs and designers, understanding the impact these products have on daily life. Our curriculum allows children to develop technical knowledge linked to structures, mechanisms, textiles and food technology. They also have the opportunity to develop skills using various tools while considering accuracy and safety.

The national curriculum for DT aims to ensure that all pupils:

1. develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world
2. 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
3. critique, evaluate and test their ideas and products and the work of others
4. understand and apply the principles of nutrition and learn how to cook.

The teaching and implementation of the DT Curriculum at the Cooperative Education East Trust is based on the National Curriculum

https://assets.publishing.service.gov.uk/media/5a7ca43640f0b6629523adc1/PRIMARY_national_curriculum_-_Design_and_technology.pdf

We utilise the schemes of work from Kapow, linking work completed to our foundation topics to ensure a well-structured approach to this creative subject.

We have taken the National Curriculum attainment targets for DT and grouped them into learning lenses in order to align them with our **C.A.R.E.** vision. As a Trust we ensure we **C.A.R.E.** and that our children will be **Confident, Able to meet future challenges, Responsible members of the community and Effective Learners.**

In order to describe DT across the school we have developed a shared language to be used with all learners across each class and year group.

The 4 learning lenses in DT that we use are:

- Design
- Make
- Evaluate
- Technical knowledge

Curriculum Map

Cycle A

	<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>Reception</u>	Textiles Book Marks		Structure & Junk Modelling	Structures Boats (Life Boat)	Cooking and Nutrition	
<u>Year 1/2</u>	Mechanisms - Making a Moving Story Book		Balanced Diet		Textiles - Puppets (Link to Africa)	
<u>Year 3/4</u>		Textiles - Fastenings		Digital World - Wearable Technology		Electrical Systems - Electrical poster
<u>Year 5/6</u>		Digital World - Navigating the World		Electrical Systems - Steady Hand Game		Structures - Bridges

Cycle B

	<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>Reception</u>	Textiles Book Marks		Structure & Junk Modelling	Structures Boats (Life Boat)	Cooking and Nutrition	
<u>Year 1/2</u>		Smoothies (Link to explorers)		Structures - Baby Bear's Chair		Mechanism Fairground Wheel (Link to History of seaside)
<u>Year 3/4</u>		Eating Seasonally		Structure - Constructing a Castle		Mechanical Systems - Making a Slingshot Car
<u>Year 5/6</u>	Developing a Recipe		Mechanical Systems - Automata Toys		Textiles - Stuffed Toys	

Early Years Curriculum

The EYFS framework is structured across seven areas of learning rather than subject areas. Below is a table highlighting how skills taught in Reception feed into the National Curriculum subjects.

The Statutory Framework for EYFS states that:

The development of children's artistic and cultural awareness supports their imagination and creativity. It is important that children have regular opportunities to engage with the arts, enabling them to explore and play with a wide range of media and materials. The quality and variety of what children see, hear and participate in is crucial for developing their understanding, self-expression, vocabulary and ability to communicate through the arts. The frequency, repetition and depth of their experiences are fundamental to their progress in interpreting and appreciating what they hear, respond to and observe.

<u>Early Years Curriculum</u>	<u>When is it taught?</u>
Fine Motor Skills Use a range of small tools, including scissors, paint brushes and cutlery	This is taught discreetly throughout the year in both structured adult directed activities and throughout continuous provision.
Expressive Arts and Design - Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. - Share their creations, explaining the process they have used.	This is taught discreetly throughout the year in both structured adult directed activities and throughout continuous provision.

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.

Pupils should be taught:

<u>National Curriculum</u>	<u>Learning Lenses</u>	<u>When is it taught?</u>	<u>Links with EYFS & KS2</u>
Design purposeful, functional, appealing products for themselves and other users based on design criteria	Design	Cycle A Term 1 Moving Storybooks Cycle A Term 3 Balanced Diet Cycle A Term 5 Puppets Cycle B Term 3 Smoothies Cycle B Term 4 Baby Bear's Chair Cycle B Term 6 Fairground Wheel	EYFS Spring 1 & 2 Y3/4 Cycle A Term 2 Fastenings Y3/4 Cycle A Term 4 Wearable Tech Y3/4 Cycle A Term 6 Electric Poster Y3/4 Cycle B Term 4 Castles Y3/4 Cycle B Term 6 Slingshot Cars Y5/6 Cycle A Term 2 Navigating the World Y5/6 Cycle A Term 4 Steady Hand Game Y5/6 Cycle A Term 6 Bridges Y5/6 Cycle B Term 1 Developing a Recipe Y5/6 Cycle B Term 3 Automata Toys Y5/6 Cycle B Term 5 Stuffed Toys
Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology	Design	Cycle A Term 1 Moving Storybooks Cycle A Term 3 Balanced Diet Cycle A Term 5 Puppets Cycle B Term 3 Smoothies Cycle B Term 4 Baby Bear's Chair Cycle B Term 6 Fairground Wheel	EYFS Spring 1 & 2 Y3/4 Cycle A Term 2 Fastenings Y3/4 Cycle A Term 4 Wearable Tech Y3/4 Cycle A Term 6 Electric Poster Y3/4 Cycle B Term 2 Eating Seasonally Y3/4 Cycle B Term 4 Castles Y3/4 Cycle B Term 6 Slingshot Cars Y5/6 Cycle A Term 2 Navigating the World Y5/6 Cycle A Term 4 Steady Hand Game Y5/6 Cycle A Term 6 Bridges Y5/6 Cycle B Term 1 Developing a Recipe Y5/6 Cycle B Term 3 Automata Toys Y5/6 Cycle B Term 5 Stuffed Toys
Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]	Make	Cycle A Term 1 Moving Storybooks Cycle A Term 3 Balanced Diet Cycle A Term 5 Puppets Cycle B Term 3 Smoothies Cycle B Term 4 Baby Bear's Chair Cycle B Term 6 Fairground Wheel	EYFS Spring 1 & 2 and ongoing throughout the year in continuous provision. Y3/4 Cycle A Term 2 Fastenings Y3/4 Cycle A Term 6 Electric Poster Y3/4 Cycle B Term 2 Eating Seasonally Y3/4 Cycle B Term 4 Castles Y3/4 Cycle B Term 6 Slingshot Cars Y5/6 Cycle A Term 2 Navigating the World Y5/6 Cycle A Term 4 Steady Hand Game Y5/6 Cycle A Term 6 Bridges Y5/6 Cycle B Term 1 Developing a Recipe Y5/6 Cycle B Term 3 Automata Toys Y5/6 Cycle B Term 5 Stuffed Toys
Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics	Make	Cycle A Term 1 Moving Storybooks Cycle A Term 3 Balanced Diet Cycle A Term 5 Puppets Cycle B Term 3 Smoothies Cycle B Term 4 Baby Bear's Chair Cycle B Term 6 Fairground Wheel	EYFS Spring 1 & 2, Summer 1 and ongoing throughout the year in continuous provision. Y3/4 Cycle A Term 2 Fastenings Y3/4 Cycle A Term 6 Electric Poster Y3/4 Cycle B Term 2 Eating Seasonally Y3/4 Cycle B Term 4 Castles Y3/4 Cycle B Term 6 Slingshot Cars Y5/6 Cycle A Term 4 Steady Hand Game Y5/6 Cycle A Term 6 Bridges Y5/6 Cycle B Term 1 Developing a Recipe Y5/6 Cycle B Term 3 Automata Toys

			Y5/6 Cycle B Term 5 Stuffed Toys
Explore and evaluate a range of existing products	Evaluate	Cycle A Term 1 Moving Storybooks Cycle A Term 3 Balanced Diet Cycle A Term 5 Puppets Cycle B Term 3 Smoothies Cycle B Term 4 Baby Bear's Chair Cycle B Term 6 Fairground Wheel	Y3/4 Cycle A Term 2 Fastenings Y3/4 Cycle A Term 4 Wearable Tech Y3/4 Cycle B Term 4 Castles Y3/4 Cycle B Term 6 Slingshot Cars Y5/6 Cycle A Term 4 Steady Hand Game Y5/6 Cycle A Term 6 Bridges Y5/6 Cycle B Term 1 Developing a Recipe Y5/6 Cycle B Term 3 Automata Toys Y5/6 Cycle B Term 5 Stuffed Toys
Evaluate their ideas and products against design criteria	Evaluate	Cycle A Term 1 Moving Storybooks Cycle A Term 3 Balanced Diet Cycle A Term 5 Puppets Cycle B Term 3 Smoothies Cycle B Term 4 Baby Bear's Chair Cycle B Term 6 Fairground Wheel	Y3/4 Cycle A Term 2 Fastenings Y3/4 Cycle A Term 4 Wearable Tech Y3/4 Cycle A Term 6 Electric Poster Y3/4 Cycle B Term 4 Castles Y3/4 Cycle B Term 6 Slingshot Cars Y5/6 Cycle A Term 2 Navigating the World Y5/6 Cycle A Term 4 Steady Hand Game Y5/6 Cycle A Term 6 Bridges Y5/6 Cycle B Term 1 Developing a Recipe Y5/6 Cycle B Term 3 Automata Toys Y5/6 Cycle B Term 5 Stuffed Toys
Build structures, exploring how they can be made stronger, stiffer and more stable	Technical Knowledge	Cycle B Term 4 Baby Bear's Chair	EYFS Spring 1 & 2 and ongoing throughout the year in continuous provision. Y3/4 Cycle B Term 4 Castles Y5/6 Cycle A Term 6 Bridges
Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	Technical Knowledge	Cycle A Term 1 Moving Storybooks Cycle B Term 6 Fairground Wheel	Y3/4 Cycle B Term 6 Slingshot Cars Y5/6 Cycle B Term 3 Automata Toys
Use the basic principles of a healthy and varied diet to prepare dishes	Design Make Evaluate	Cycle A Term 3 Balanced Diet	EYFS Summer 1 & 2 Y3/4 Cycle B Term 2 Eating Seasonally Y5/6 Cycle B Term 1 Developing a Recipe
Understand where food comes from.	Design Make Evaluate	Cycle A Term 3 Balanced Diet Cycle B Term 3 Smoothies	EYFS Summer 1 & 2 Y3/4 Cycle B Term 2 Eating Seasonally Y5/6 Cycle B Term 1 Developing a Recipe

Key Stage 2

Pupils should be taught to develop their techniques, including their control and their use of materials, with creativity, experimentation and an increasing awareness of different kinds of art, craft and design.

Pupils should be taught:

<u>National Curriculum</u>	<u>Learning Lenses</u>	<u>When is it taught?</u>	<u>Links with EYFS & KS1</u>
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	Design	Y3/4 Cycle A Term 2 Fastenings Y3/4 Cycle A Term 4 Wearable Tech Y3/4 Cycle A Term 6 Electric Poster Y3/4 Cycle B Term 4 Castles Y3/4 Cycle B Term 6 Slingshot	EYFS Spring 1 & 2 (generate, develop ideas) Cycle A Term 1 Moving Storybooks Cycle A Term 3 Balanced Diet Cycle A Term 5 Puppets Cycle B Term 3 Smoothies Cycle B Term 4 Baby Bear's Chair Cycle B Term 6 Fairground Wheel

groups		<p>Cars</p> <p>Y5/6 Cycle A Term 2 Navigating the World</p> <p>Y5/6 Cycle A Term 4 Steady Hand Game</p> <p>Y5/6 Cycle A Term 6 Bridges</p> <p>Y5/6 Cycle B Term 1 Developing a Recipe</p> <p>Y5/6 Cycle B Term 3 Automata Toys</p> <p>Y5/6 Cycle B Term 5 Stuffed Toys</p>	
Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design	Design	<p>Y3/4 Cycle A Term 2 Fastenings</p> <p>Y3/4 Cycle A Term 4 Wearable Tech</p> <p>Y3/4 Cycle A Term 6 Electric Poster</p> <p>Y3/4 Cycle B Term 2 Eating Seasonally</p> <p>Y3/4 Cycle B Term 4 Castles</p> <p>Y3/4 Cycle B Term 6 Slingshot Cars</p> <p>Y5/6 Cycle A Term 2 Navigating the World</p> <p>Y5/6 Cycle A Term 4 Steady Hand Game</p> <p>Y5/6 Cycle A Term 6 Bridges</p> <p>Y5/6 Cycle B Term 1 Developing a Recipe</p> <p>Y5/6 Cycle B Term 3 Automata Toys</p> <p>Y5/6 Cycle B Term 5 Stuffed Toys</p>	<p>EYFS Spring 1 & 2 (generate, develop ideas)</p> <p>Cycle A Term 1 Moving Storybooks</p> <p>Cycle A Term 3 Balanced Diet</p> <p>Cycle A Term 5 Puppets</p> <p>Cycle B Term 3 Smoothies</p> <p>Cycle B Term 4 Baby Bear's Chair</p> <p>Cycle B Term 6 Fairground Wheel</p>
Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately	Make	<p>Y3/4 Cycle A Term 2 Fastenings</p> <p>Y3/4 Cycle A Term 6 Electric Poster</p> <p>Y3/4 Cycle B Term 2 Eating Seasonally</p> <p>Y3/4 Cycle B Term 4 Castles</p> <p>Y3/4 Cycle B Term 6 Slingshot Cars</p> <p>Y5/6 Cycle A Term 2 Navigating the World</p> <p>Y5/6 Cycle A Term 4 Steady Hand Game</p> <p>Y5/6 Cycle A Term 6 Bridges</p> <p>Y5/6 Cycle B Term 1 Developing a Recipe</p> <p>Y5/6 Cycle B Term 3 Automata Toys</p> <p>Y5/6 Cycle B Term 5 Stuffed Toys</p>	<p>EYFS Spring 1 & 2 and ongoing throughout the year in continuous provision.</p> <p>Cycle A Term 1 Moving Storybooks</p> <p>Cycle A Term 3 Balanced Diet</p> <p>Cycle A Term 5 Puppets</p> <p>Cycle B Term 3 Smoothies</p> <p>Cycle B Term 4 Baby Bear's Chair</p> <p>Cycle B Term 6 Fairground Wheel</p>
select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and	Make	<p>Y3/4 Cycle A Term 2 Fastenings</p> <p>Y3/4 Cycle A Term 6 Electric Poster</p> <p>Y3/4 Cycle B Term 2 Eating Seasonally</p> <p>Y3/4 Cycle B Term 4 Castles</p> <p>Y3/4 Cycle B Term 6 Slingshot</p>	<p>EYFS Spring 1 & 2 and ongoing throughout the year in continuous provision.</p> <p>Cycle A Term 1 Moving Storybooks</p> <p>Cycle A Term 3 Balanced Diet</p> <p>Cycle A Term 5 Puppets</p> <p>Cycle B Term 3 Smoothies</p> <p>Cycle B Term 4 Baby Bear's Chair</p>

aesthetic qualities		<p>Cars</p> <p>Y5/6 Cycle A Term 4 Steady Hand Game</p> <p>Y5/6 Cycle A Term 6 Bridges</p> <p>Y5/6 Cycle B Term 1 Developing a Recipe</p> <p>Y5/6 Cycle B Term 3 Automata Toys</p> <p>Y5/6 Cycle B Term 5 Stuffed Toys</p>	Cycle B Term 6 Fairground Wheel
Investigate and analyse a range of existing products	Evaluate	<p>Y3/4 Cycle A Term 2 Fastenings</p> <p>Y3/4 Cycle A Term 4 Wearable Tech</p> <p>Y3/4 Cycle B Term 4 Castles</p> <p>Y3/4 Cycle B Term 6 Slingshot Cars</p> <p>Y5/6 Cycle A Term 4 Steady Hand Game</p> <p>Y5/6 Cycle A Term 6 Bridges</p> <p>Y5/6 Cycle B Term 1 Developing a Recipe</p> <p>Y5/6 Cycle B Term 3 Automata Toys</p> <p>Y5/6 Cycle B Term 5 Stuffed Toys</p>	<p>Cycle A Term 1 Moving Storybooks</p> <p>Cycle A Term 3 Balanced Diet</p> <p>Cycle A Term 5 Puppets</p> <p>Cycle B Term 3 Smoothies</p> <p>Cycle B Term 4 Baby Bear's Chair</p> <p>Cycle B Term 6 Fairground Wheel</p>
Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work	Evaluate	<p>Y3/4 Cycle A Term 2 Fastenings</p> <p>Y3/4 Cycle A Term 4 Wearable Tech</p> <p>Y3/4 Cycle A Term 6 Electric Poster</p> <p>Y3/4 Cycle B Term 4 Castles</p> <p>Y3/4 Cycle B Term 6 Slingshot Cars</p> <p>Y5/6 Cycle A Term 2 Navigating the World</p> <p>Y5/6 Cycle A Term 4 Steady Hand Game</p> <p>Y5/6 Cycle A Term 6 Bridges</p> <p>Y5/6 Cycle B Term 1 Developing a Recipe</p> <p>Y5/6 Cycle B Term 3 Automata Toys</p> <p>Y5/6 Cycle B Term 5 Stuffed Toys</p>	<p>Cycle A Term 1 Moving Storybooks</p> <p>Cycle A Term 3 Balanced Diet</p> <p>Cycle A Term 5 Puppets</p> <p>Cycle B Term 3 Smoothies</p> <p>Cycle B Term 4 Baby Bear's Chair</p> <p>Cycle B Term 6 Fairground Wheel</p>
Understand how key events and individuals in design and technology have helped shape the world	Evaluate	<p>Y3/4 Cycle A Term 4 Wearable Tech</p> <p>Y3/4 Cycle B Term 6 Slingshot Cars</p> <p>Y5/6 Cycle A Term 4 Steady Hand Game</p> <p>Y5/6 Cycle B Term 1 Developing a Recipe</p> <p>Y5/6 Cycle B Term 3 Automata Toys</p>	N/A
Apply their understanding of how to strengthen,	Technical Knowledge	<p>Y3/4 Cycle B Term 4 Castles</p> <p>Y5/6 Cycle A Term 6 Bridges</p>	EYFS Spring 1 & 2 and ongoing throughout the year in continuous provision.

stiffen and reinforce more complex structures			Cycle B Term 4 Baby Bear's Chair
Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]	Technical Knowledge	Y3/4 Cycle B Term 6 Slingshot Cars Y5/6 Cycle B Term 3 Automata Toys	Cycle A Term 1 Moving Storybooks Cycle B Term 6 Fairground Wheel
Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]	Technical Knowledge	Y3/4 Cycle A Term 6 Electric Poster Y5/6 Cycle A Term 4 Steady Hand Game	N/A
Apply their understanding of computing to program, monitor and control their products	Technical Knowledge	Y3/4 Cycle A Term 4 Wearable Tech Y5/6 Cycle B Term 1 Developing a Recipe Y5/6 Cycle A Term 2 Navigating the World	N/A
Understand and apply the principles of a healthy and varied diet	Design Make Evaluate	Y3/4 Cycle B Term 2 Eating Seasonally Y5/6 Cycle B Term 1 Developing a Recipe	EYFS Summer 1 & 2 Cycle A Term 3 Balanced Diet
Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques	Design Make Evaluate	Y3/4 Cycle B Term 2 Eating Seasonally Y5/6 Cycle B Term 1 Developing a Recipe	EYFS Summer 1 & 2 Cycle A Term 3 Balanced Diet
Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.	Design Make Evaluate	Y3/4 Cycle B Term 2 Eating Seasonally Y5/6 Cycle B Term 1 Developing a Recipe	EYFS Summer 1 & 2 Cycle A Term 3 Balanced Diet

