



Design and Technology Overview

Chadsmead Primary Academy - Design and Technology Curriculum Overview

Structures	Mechanics	Electricals	Textiles	Food & Nutrition
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		Autumn				Spring				Summer		
EYFS	Cycle A (2022/23)	Rhyme Time	Let's Explore	Build it up	Marvellous Machines	Long Ago	Puppets & Pop Ups	Ready Steady Grow	Signs of Spring	Animal Safari	Creep, crawl & wriggle	On the Beach
		x	x	Structures: (Junk Modelling) Design and building a house; Design and build a bridge	Food & Nutrition: Make a healthy snack Mechanisms: Make a model vehicle with wheels and axels	x	Textiles: Make a puppet; Create a pop up picture; Sew using a needle and thread	Structures: Make a seed sorter and shake maker Food & Nutrition: Make a fruit salad	x	x	Structures: (Junk Modelling)	Mechanisms: Make a lighthouse which lights up using a simple circuit.
	Cycle B (2023/24)	Me & My Community	Exploring Autumn	Once Upon a Time	Can we explore it	Winter Wonderland	Starry Night	Dangerous Dinosaurs	Puddles and Rainbows	Sunshine & Sunflowers	Shadows & Reflections	Big Wide World
		Mechanisms: Make a model vehicle with wheels and axels	Structures: Make a wooden Nog the hedgehog Food & Nutrition: Make hedgehogs bread	Food & Nutrition: Make Porridge with a topping Textiles: Make a shoe for Cinderella	x	Structures: (Junk Modelling) Make a bird feeder & Design a penguin	Textiles: Make an alien sock puppet	Structures (Junk Modelling) Make a dinosaur	Structures Make a rainmaker	Food & Nutrition: Make a smoothie	x	Food and Nutrition Make a pizza Tortilla

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		Autumn 2	Spring 2	Summer 2
Y1/2	Cycle A (2022/23)	How can we make a moving picture?	How can we make an animal shelter?	How can we prepare a healthy snack?
		<u>Mechanisms</u> <u>Sliders and Levers</u> <u>Moving Pictures</u> Related Designer: Lillian Moller Gilbreth (Inventor of the pedal bin) Children learn to research, design, make and evaluate different mechanisms in order to create a picture that moves using sliders or levers such as a superhero or Christmas related design.	<u>Structures</u> <u>Free-Standing Structures</u> <u>Animal shelters</u> Related Designer: Alex Darvill (Animal Welfare Shelter Architect) Children learn to research, design, make and evaluate an animal shelter that can be used in the garden such as a hedgehog house, bird house or fairy house	<u>Food & Nutrition</u> <u>Preparing Fruit & Vegetables</u> <u>A Healthy Snack</u> Related Designer: Martin Hablesreiter (Food Designer) Children learn to research, design, make and evaluate a healthy snack such as fruit salad, fruit kebabs, vegetable salad or a range of picnic food.
	Cycle B (2023/24)	Autumn 2	Spring 2	Summer 1
		How can we make a moving push/pull vehicle?	How can we make a textile animal?	How can we make a free standing structure?
		<u>Mechanisms</u> <u>Wheels and Axels</u> <u>A push/pull vehicle</u> Related Designer: Henry Ford (Founder of the Ford Car Company) Children learn to research, design, make and evaluate a simple push and pull movement mechanism, involved with vehicles such as a taxi, fire engine, police car, ambulance that they may find in a city such as London.	<u>Textiles</u> <u>Templates & Joining</u> <u>Textile animals</u> Related Designer: Jim Henson (Puppeteer – Creator of the Muppets) Children learn to join together pieces of material in order to research, design, make and evaluate their sewing to create creepy crawlies or glove puppet animals that represent living things	<u>Free-Standing Structures</u> <u>A fortress, bridge or tower</u> Related Designer: Thomas Telford (Suspension Bridge Designer) Children learn to research, design, make and evaluate a free standing structure such as a bridge for cars; a tower for Rapunzel or a type of castle for a knight or king to live in.

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		Autumn 2	Spring 2	Summer 2
Y3/4	Cycle A (2022/23)	How can we make a moving toy?	How can we make a personal item?	How can we make a healthy meal?
		<u>Mechanics</u> <u>Pneumatics</u> Moving toy Related Designer: Jan Wanamaker (Pneumatic Tube Designer) Children learn to research, design, make and evaluate a moving toy such as a model that pops up using air flow through pneumatic systems,	<u>Textiles</u> 2D Shape/3D Product A personal item Related Designer: Louis Vuitton (Fashion Designer) Children learn to research, design, make and evaluate a 2D design and construct a 3D version of a personal item such as a purse, wallet, toy, mascot, pencil case; or weaving basket	<u>Food Nutrition: Healthy & Varied Diet</u> Healthy Meal Related Designer: Nadiya Hussein (Chef) Children learn to research, design, make and evaluate a warm healthy meal such as pasta, ratatouille, soup, hot sandwich or similar item using a table top heat source.
	Cycle B (2023/24)	Autumn 2	Spring 2	Summer 2
		How can we make a moving card?	How can we make an earthquake proof shelter?	How can we make an electrical item?
		<u>Mechanics</u> <u>Lever & Linkages</u> Moving Card / Poster Related Designer: Torgny Fjeldskaar (Bike Designer) Children learn to research, design, make and evaluate a moving animal Poster/Card that uses levers and links to make it move in different ways	<u>Structures</u> <u>Frame Structures</u> 3D Design (CAD) Related Designer: Joseph Penzien (Earthquake Engineer Shake Table Designer) Children learn to research, design, make and evaluate an earthquake proof framed shelter that will withstand shaking vigorously using computer aided design.	<u>Electricals</u> <u>Circuits & switches</u> Alarms / Lights Related Designer: Thomas Eddison (Creator of the lightbulb) Children learn to research, design, make and evaluate an electrical item such as a light up sign, traffic light, reading light, torch or noise making toy (ICT - Crumble Unit)

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		Autumn 1	Spring 1	Summer 1
Y5/6	Cycle A (2022/23)	How do we make personal item that combines materials?	How do we make a controlled electrical system?	How do we create an item that turns, lifts or moves?
		<u>Textiles</u> <u>Combining fabrics</u> <u>Personal Item</u> Related Designer: Ed Mironuik (Felt artist) Children learn to research, design, make and evaluate a personal item combining a range of fabrics and materials such as a mobile phone bag, a slipper, a hat, or a section of a blanket	<u>Electricals</u> <u>Monitoring & Control</u> <u>LDR Control Systems</u> Related Designer: Alessandro Volta (Creator of the electrical battery) Children learn to research, design, make and evaluate a controlled electrical item such as a windmill, alarm system or lighting system (ICT - Crumble)	<u>Mechanics</u> <u>Pulleys & Gears</u> <u>Lift, Turn or Move</u> Related Designer: Archimedes (Pulley System developer) Children learn to research, design, make and evaluate a mechanical items that turns, moves or lifts such as a space themed fairground ride or a space buggy
	Cycle B (2023/24)	Autumn 2	Spring 2	Summer 2
		How do we make an autonoma animal?	How do we make an emergency shelter?	How do we make a healthy meal?
		<u>Mechanics</u> <u>CAMS</u> <u>Autonoma Animals</u> Related Designer: Jaquet-Droz (Automaton Designer) Children learn to research, design, make and evaluate an autonoma animal using CAMS such as a moving dragon or musician	<u>Structure</u> <u>Shell Structures</u> <u>Emergency boxes</u> Related Designer: Henry Hopkins Sibley (Inventor of the tent) Children learn to research, design, make and evaluate an emergency shell shelter such as a tent, gazebo or bus shelter for an emergency situation.	<u>Food Nutrition:</u> <u>Celebrating Culture/Diversity</u> <u>Healthy Meal</u> Related Designer: Gordon Ramsey Michelin Star Chef Children learn to research, design, make and evaluate a range of healthy items that celebrate culture and seasonality for a healthy meal such as bread, biscuits, scones, or muffins which include the use of an oven