

Design Technology Curriculum Map 2026-2027



Curriculum Plan based on KAPOW Design and technology and Art and design (revised scheme): Long-term plan

Design and Technology in the Early Years

The Statutory Framework for the Early Years Foundation Stage (September 2021) separates learning and development into seven areas (three prime areas and four specific areas). The most relevant statements for DT are taken from Physical Development (prime area of learning) and Expressive Arts and Design (specific area of learning) and the targets that relate to the DT curriculum are as follows:

Physical development

- Progress towards a more fluent style of moving, with developing control and grace.
- Develop their small motor skills so that they can use a range of tools competently, safely and confidently.
- Use their core muscle strength to achieve a good posture when sitting at a table or sitting on the floor.
- Use a range of small tools, including scissors, paintbrushes and cutlery (Fine motor skills ELG).

Expressive Art and Design

- Explore, use and refine a variety of artistic effects to express their ideas and feelings.
- Return to and build on their previous learning, refining ideas and developing their ability to represent them.
- Create collaboratively, sharing ideas, resources and skills
- Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function (creating with materials ELG).
- Share their creations, explaining the process they have used (creating with materials ELG).

Design and technology in the Early Years at St John's Catholic Primary School

At St John's we are big advocates of encouraging and developing DT skills in the Early Years through a mixture of adult led sessions and child initiated play. Many of our different areas of learning allow for open-ended DT projects. These include: junk modelling, small-scale indoor construction, large-scale outdoor construction, water play and sand play. Children are taught how to safely (and independently) use a variety of skills throughout the year and these skills are built upon in Year 1.

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Design Technology including cooking and nutrition will be taught by each year group in the following terms:

Term 1	Term 2	Term 3	Term 4	Term 5	Term 6
Year 2: Kapow Unit - Structures: Chair/Throne	Year 1 Kapow Unit - Cooking and Nutrition Fruit and Vegetables	Year 1 Kapow Unit- Textiles Simple Stitches	Year 2 Kapow Unit - Mechanisms/ Mechanical Systems Fairground Wheel	Year 2 Kapow Unit - Mechanisms/ Mechanical Systems Moving Monsters	Year 1: Kapow Unit - Structures: Constructing a Pencil Pot
Year 4 Textiles – Fastening – Book Cover	Year 3 Structures Pavilions	Year 4 Mechanisms/Mechanical Systems: Sling-Shot Car	Year 3 Digital World Wearable Technology	Year 4 Electrical : Torches	Year 3 Cooking and Nutrition Eating Seasonally
Year 6 Mechanisms/Mechanical Systems: Playgrounds	Year 5 Cooking and Nutrition What could be healthier?	Year 6 Digital World Navigating the world	Year 5 Electrical Doodlers	Year 6 Kapow Unit - Textiles: Waistcoats	Year 5 Mechanisms/Mechan ical Systems Pop-up book

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Year 1	Over-arching learning theme	<u>Term 2</u> Cooking and Nutrition	<u>Term 4</u> Textiles	<u>Term 6</u> Structures
	National curriculum statements	Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics Evaluate their ideas and products against design criteria Understand where food comes from	Design purposeful, functional, appealing products for themselves and other users based on design criteria Generate, develop, model and communicate their ideas through talking, drawing, templates, mock- ups and, where appropriate, information and communication technology Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics Evaluate their ideas and products against design criteria	Design purposeful, functional, appealing products for themselves and other users based on design criteria Generate, develop, model and communicate their ideas through talking, drawing, templates, mock- ups and, where appropriate, information and communication technology Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics Explore and evaluate a range of existing products Evaluate their ideas and products against design criteria Build structures, exploring how they can be made stronger, stiffer and more stable Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.
	Learning Objectives	Fruit and Vegetables Can you make Traction Man a healthy drink? To identify fruits.	Textiles – bunting To explore how fabrics are made and used. To thread a needle and make stitches. To sketch a design for a piece of bunting.	Stable Structures – Pencil Pot To explore stability by balancing. To explore wide or narrow bases by building towers.

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		To describe where fruits and vegetables grow. To practise food preparation skills.	To stitch a design for a piece of celebratory bunting. To evaluate my product.	To test a structure's stability with weight added in different places. To design a stable structure that meets the needs of a user. To use a variety of cutting and joining techniques to make a stable product (pencil holder)
	Key Vocabulary	Blend, blender, chopping board, compare, cut, design, evaluate, flavour, fork, fruit, healthy, ingredients, juice, juicer, leaf, plant, recipe, root, seed, select, smoothie, stem, table knife, taste, tree, vegetable, vine	Design, even, fabric, like, needle, stitch, sketch, thread	Base, better, compare, design, freestanding, stable, structure, unstable, user, worse, wide base, narrow base.

Year 2	Over-arching theme	<u>Term 1</u> Structures	<u>Term 3</u> Mechanisms/Mechanical Systems	<u>Term 5</u> Mechanisms/Mechanical Systems:
	National Curriculum Statements	Design purposeful, functional, appealing products for themselves and other users based on design criteria Generate, develop, model and communicate their ideas through talking, drawing, templates, mock- ups and, where appropriate, information and communication technology Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of materials and components, including construction materials,	Design purposeful, functional, appealing products for themselves and other users based on design criteria Generate, develop, model and communicate their ideas through talking, drawing, templates, mock- ups and, where appropriate, information and communication technology Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics Explore and evaluate a range of existing products	Design purposeful, functional, appealing products for themselves and other users based on design criteria Generate, develop, model and communicate their ideas through talking, drawing, templates, mock- ups and, where appropriate, information and communication technology Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

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		textiles and ingredients, according to their characteristics Evaluate their ideas and products against design criteria Build structures, exploring how they can be made stronger, stiffer and more stable	Evaluate their ideas and products against design criteria Build structures, exploring how they can be made stronger, stiffer and more stable Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	Explore and evaluate a range of existing products Evaluate their ideas and products against design criteria Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.
	Learning Objectives	A chair To explore the concept and features of structures and the stability of different shapes To explore strength in different structures To understand that the shape of the structure affects its strength To make a structure according to design criteria To produce a finished structure and evaluate its strength, stiffness and stability	Fairground Wheel To explore wheel mechanisms and design a fairground wheel. To select materials with appropriate properties. To build and test a moving wheel. To conduct a simple survey to gather opinions. To finish and evaluate a structure with a rotating wheel.	Moving Monster To look at objects and understand how they move To explore different design options To make a moving monster
	Key Vocabulary	design, criteria, man-made, natural, properties, structure, stable, shape, model, test	design brief, design criteria, evaluate, frame, model, opinion, rotate, survey	Axle, design, criteria, input, linkage mechanical, output, pivot, wheel

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Year 3	Overarching theme	Term 2 Structures	Term 4 Digital World	Term 6 Cooking and Nutrition
	National Curriculum Statements	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 groups Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics Investigate and analyse a range of existing products Evaluate their ideas and products against their own design criteria	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 groups. Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer- aided design. Investigate and analyse a range of existing products. Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. Understand how key events and individuals in design and technology have helped shape the world. Apply their understanding of computing to program, monitor and control their products.	Understand and apply principles of a healthy and varied diet Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed

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		and consider the views of others to improve their work Apply their understanding of how to strengthen, stiffen and reinforce more complex structures		
	Learning Objectives	Pavilions To create a range of different shaped frame structures To design a structure To build a frame structure To add cladding to a frame structure	Wearable Technology To research and evaluate existing products. To develop design criteria. To use code to program and control a product. To develop and communicate ideas. To develop ideas through computer-aided design. To improve a design based on feedback	Eating Seasonally To explain why food comes from different places around the world. To explain the benefits of seasonal foods. To develop cutting and peeling skills. To evaluate seasonal ingredients. To design a mock-up using criteria. To evaluate a dish.
	Key Vocabulary	3D, shapes, Cladding, Design, criteria, Innovative, Natural, Reinforce, Structure.	Analogue, analyse, annotate, badge, computer-aided design (CAD), control, design criteria, develop, digital, digital revolution, digital world, display, electronic, electronic products, fastening, feature, feedback, form,, function, initiate, layers, monitor, net, opinion, point of sale, product, product design, program, sense, Simulator, smart, technology, test, user	Appearance, arid, climate, complementary, country, cut, design, evaluate, export, fruit, grate, import, ingredients, Mediterranean, mock-up, mountain, peel, polar, seasonal, seasons, snip, taste, temperate, texture, tropical, vegetable, weather

Year 4	Overarching Theme	Term 1 Textiles:	Term 3 Mechanisms/Mechanical Systems:	Term 5 Electrical
	National Curriculum Statements	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 groups Generate, develop, model and communicate their ideas through discussion, annotated sketches,	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 groups Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design	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 groups Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams,

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		cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities Investigate and analyse a range of existing products Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work	Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics Investigate and analyse a range of existing products Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work Understand how key events and individuals in design and technology have helped shape the world Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]	prototypes, pattern pieces and computer aided design Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics Investigate and analyse a range of existing products Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work Understand how key events and individuals in design and technology have helped shape the world Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]
	Learning Objectives	Book Cover To explain the advantages and disadvantages of different types of fastening type. To design a product to meet a design criteria. To make and test a paper template. To assemble a book jacket. To evaluate a product against a design criteria.	Sling-Shot Car To build a car chassis To design a shape that reduces air resistance To make a model based on a chosen design To assemble and test my completed product	Torches To learn about electrical items and how they work To analyse and evaluate electrical products To design a product to fit a set of specific user needs To make and evaluate a torch
	Key Vocabulary	Criteria, fabric, fastening, fix, mock-up, stitch, template, design criteria, evaluate.	Chassis, energy, kinetic, mechanism, air resistance, design, structure, graphics, research, model, template	Battery, bulb, buzzer, conductor, circuit, circuit, diagram, electricity, insulator, series, circuit, switch, component, design, design criteria, diagram, evaluation, LED, model, shape, target audience, input, recyclable, theme, aesthetics, assemble,

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				equipment, ingredients, packaging, properties, sketch, test
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Year 5	Overarching theme	<u>Term 2</u> Cooking and Nutrition	<u>Term 4</u> Electrical	<u>Term 6</u> Mechanisms/Mechanical Systems:
	National Curriculum Statements	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 groups Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer- aided design Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Investigate and analyse a range of existing products Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work Understand how key events and individuals in design and technology have helped shape the world Apply their understanding of computing to program, monitor and control their products Understand and apply principles of a healthy and varied diet	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 groups Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Investigate and analyse a range of existing products Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]	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 groups Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer- aided design Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities Investigate and analyse a range of existing products Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]

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		Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed		
	Learning Objectives	Developing a recipe To understand how ingredients are reared and processed. To make adaptations to design a recipe. To evaluate nutritional content. To practise food preparation skills. To design a product label. To follow and make an adapted recipe.	Doodlers To understand how motors are used in electrical products. To investigate an existing product to determine the factors that affect the product's form and function. To put findings from research into practice to develop a unique product To develop a DIY kit for another individual to assemble their product.	Pop-up Book To design a pop-up book To follow my design brief to make my pop up book To use layers and spacers to cover the working of mechanisms To create a high-quality product suitable for a target user
	Key Vocabulary	Abattoir, adaptation, balanced, beef, brand, cook, cross-contamination, cut, design Enhance, equipment, Evaluate, farm, grate, hygiene, ingredients, label, measure, nutrient, nutrition, nutritional value Preference, press, process Recipe, safety, theme	Circuit component, configuration, current, develop, DIY, investigate, motor, motorized, problem solve, product analysis, series, circuit, stable, target, user,	Design, input, motion, mechanism, criteria, research, reinforce, model,

Year 6	Overarching theme	<u>Term 1</u> Mechanisms/Mechanical Systems: Playgrounds	<u>Term 3</u> Digital World: Navigating the World	<u>Term 5</u> Textiles: Waistcoats
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	National Curriculum Statements	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 groups Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer- aided design Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities Investigate and analyse a range of existing products Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work Apply their understanding of how to strengthen, stiffen and reinforce more complex structures	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 groups Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer- aided design Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work Apply their understanding of computing to program, monitor and control their products	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 groups Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer- aided design Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities Investigate and analyse a range of existing products Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work
	Learning Objectives	Playgrounds To design a playground with a variety of structures To build a range of structures To improve and add detail to structures To create surrounding landscape	Navigating the world To write a design brief and criteria based on a client request To write a program to include multiple functions as part of a navigation device To develop a sustainable product concept	Waistcoats To design a waistcoat To mark and cut fabric according to a design To assemble a waistcoat To decorate your waistcoat

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			To develop 3D CAD skills to produce a virtual model	
	Key Vocabulary	apparatus design criteria equipment playground landscape features cladding	Smart, smartphone, equipment, navigation, cardinal, compass, application (apps), pedometer, GPS tracker, design brief, design criteria, client, function, program, duplicate, replica, loop, variable, value, if statement, boolean, corrode, mouldable, lightweight, sustainable design, environmentally friendly, biodegradable, recyclable, product, lifecycle, product lifespan	Annotate, decorate, design criteria, fabric, target customer, waistcoat, waterproof