



# Rationale and National Curriculum links to subject

## Subject Overview

This curriculum aims to inspire students to recognize the integral role of design in society. It is divided into three core areas: "Cook," "Sew," and "Build." Each year group will engage in a unit from each area annually, fostering a well-rounded understanding of design principles and practical skills.

The curriculum incorporates two essential design aspects: environmental sustainability and enterprise innovation. These aspects are intertwined throughout the units, encouraging students to consider the broader implications of their designs.

## Aims and Objectives

- **Inspire Creativity:** To ignite students' imaginations and encourage them to think creatively about design solutions.
- **Develop Practical Skills:** To equip students with practical skills in cooking, sewing, and building, fostering a sense of accomplishment.
- **Foster Critical Thinking:** To cultivate students' ability to analyze, evaluate, and problem-solve within the design process.
- **Promote Sustainability:** To instill an awareness of environmental issues and inspire sustainable design practices.
- **Cultivate Entrepreneurial Spirit:** To encourage students to think like entrepreneurs, considering market needs and innovative solutions.

## Progression of Knowledge and Skills

The curriculum is designed to gradually build upon students' knowledge and skills across the six years of primary education. Key concepts and skills are introduced and reinforced through a variety of practical activities and theoretical learning.

### Key concepts and skills include:

- **Cooking:** Nutrition, food safety, culinary techniques, cultural diversity, sustainable food practices.
- **Sewing:** Textile properties, sewing techniques, fashion design, ethical production, recycling and upcycling.
- **Building:** Structural engineering, mechanical principles, electrical circuits, user-centered design, material properties.



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## Teaching and Learning Approaches

The curriculum emphasizes a hands-on, inquiry-based approach to learning. Students are encouraged to explore, experiment, and reflect on their design processes. Key teaching and learning strategies include:

- **Project-Based Learning:** Students work on real-world projects, applying their skills and knowledge to solve problems.
- **Collaborative Learning:** Students work together in groups to share ideas, support each other, and develop teamwork skills.
- **Experiential Learning:** Students learn through direct experience, such as cooking, sewing, and building.
- **Reflective Learning:** Students are encouraged to reflect on their work, identify areas for improvement, and celebrate their achievements.

By combining practical skills, theoretical knowledge, and creative thinking, this curriculum aims to prepare students to become confident and innovative designers.



Langney Primary Academy



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## National Curriculum programme of study

Key Stage 1

	Year 1		
	Dips & Vegetables	Animal Sock Puppets	Vehicles
Design: design purposeful, functional, appealing products for themselves and other users based on design criteria		✓	✓
Design: generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology		✓	✓
Make: select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]	✓	✓	✓
Make: select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics	✓	✓	✓
Evaluate: explore and evaluate a range of existing products		✓	
Evaluate: evaluate their ideas and products against design criteria		✓	
Technical knowledge: build structures, exploring how they can be made stronger, stiffer and more stable			✓
Technical knowledge: explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.			✓
Cooking and nutrition: use the basic principles of a healthy and varied diet to prepare dishes	✓	✓	
Cooking and nutrition: understand where food comes from	✓	✓	



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## National Curriculum programme of study

Key Stage 1

	Year 2		
	Gingerbread	Pictures	Pencil cases
Design: design purposeful, functional, appealing products for themselves and other users based on design criteria		✓	✓
Design: generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology		✓	✓
Make: select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]	✓	✓	✓
Make: select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics	✓	✓	✓
Evaluate: explore and evaluate a range of existing products		✓	✓
Evaluate: evaluate their ideas and products against design criteria		✓	✓
Technical knowledge: build structures, exploring how they can be made stronger, stiffer and more stable		✓	
Technical knowledge: explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.		✓	
Cooking and nutrition: use the basic principles of a healthy and varied diet to prepare dishes	✓		
Cooking and nutrition: understand where food comes from	✓		



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## National Curriculum programme of study

Key Stage 2

	Year 3		
	Key Rings / Decorations	Pop-Up Books	Pasta
Design: use research and develop design criteria to inform the design of innovative, function-al, appealing products that are fit for purpose, aimed at particular individuals or groups	✓	✓	
Design: generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design [not covered by The PKC curriculum]	✓	✓	
Make: select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately	✓	✓	✓
Make: 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	✓	✓	✓
Evaluate: investigate and analyse a range of existing products	✓	✓	
Evaluate: evaluate their ideas and products against their own design criteria and consider the views of others to improve their work	✓	✓	
Technical knowledge: apply their understanding of how to strengthen, stiffen and reinforce more complex structures		✓	
Technical knowledge: understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]		✓	
Cooking and nutrition: understand and apply the principles of a healthy and varied diet			✓
Cooking and nutrition: prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques			✓
Cooking and nutrition: understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.			✓



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## National Curriculum programme of study

	Year 4		
	Cushions	Moving Playgrounds	Ratatouille & Couscous
Design: use research and develop design criteria to inform the design of innovative, function-al, appealing products that are fit for purpose, aimed at particular individuals or groups	✓	✓	
Design: generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design [not covered by The PKC curriculum]	✓	✓	
Make: select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately	✓	✓	✓
Make: 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	✓	✓	✓
Evaluate: investigate and analyse a range of existing products	✓	✓	
Evaluate: evaluate their ideas and products against their own design criteria and consider the views of others to improve their work	✓	✓	
Evaluate: understand how key events and individuals in design and technology have helped shape the world	✓	✓	



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## National Curriculum programme of study

Key Stage 2

	Year 4		
	Cushions	Moving Playgrounds	Ratatouille & Couscous
Technical knowledge: apply their understanding of how to strengthen, stiffen and reinforce more complex structures		✓	
Technical knowledge: understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]		✓	
Technical knowledge: understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]		✓	
Cooking and nutrition: understand and apply the principles of a healthy and varied diet			✓
Cooking and nutrition: prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques			✓
Cooking and nutrition: understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.			✓



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## National Curriculum programme of study

Key Stage 2

Year 5		
Cams Toys	Pitta Bread	Bags
✓		✓
✓		✓
✓	✓	✓
✓	✓	✓
✓		✓
✓		✓
✓		✓

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

Design: generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design [not covered by The PKC curriculum]

Make: select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately

Make: 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

Evaluate: investigate and analyse a range of existing products

Evaluate: evaluate their ideas and products against their own design criteria and consider the views of others to improve their work

Evaluate: understand how key events and individuals in design and technology have helped shape the world





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## National Curriculum programme of study

Key Stage 2

Technical knowledge: apply their understanding of how to strengthen, stiffen and reinforce more complex structures
Technical knowledge: understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]
Cooking and nutrition: understand and apply the principles of a healthy and varied diet
Cooking and nutrition: prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques
Cooking and nutrition: understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.

Year 5		
Cams Toys	Pitta Bread	Bags
✓		
✓		
	✓	
	✓	
	✓	



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## National Curriculum programme of study

Key Stage 2

Year 6		
Electrical toys	Upcycling Fashion	Mezze
✓	✓	
✓	✓	
✓	✓	✓
✓	✓	✓
✓	✓	

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

Design: generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design [not covered by The PKC curriculum]

Make: select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately

Make: 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

Evaluate: investigate and analyse a range of existing products



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## National Curriculum programme of study

Key Stage 2

Year 6		
Electrical toys	Upcycling Fashion	Mezze
✓	✓	
✓	✓	
✓	✓	
✓		
		✓
		✓
		✓

Evaluate: investigate and analyse a range of existing products

Evaluate: evaluate their ideas and products against their own design criteria and consider the views of others to improve their work

Evaluate: understand how key events and individuals in design and technology have helped shape the world

Technical knowledge: understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]

Cooking and nutrition: understand and apply the principles of a healthy and varied diet

Cooking and nutrition: prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques

Cooking and nutrition: understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.