



# Chestnuts Primary School

'Encourage, Enable, Empower'

## Design and Technology Progression Document

Cooking and Nutrition							
Pupils should be taught how to cook and apply principles of nutrition and healthy eating, instilling a love of cooking							
Curriculum Strand	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	<p><b>ELG –</b> To manage their own basic hygiene and personal needs, including dressing, going to the toilet, and understanding the importance of healthy food choices To use a range of small tools, including scissors, paint brushes and cutlery</p>	<p><b>Design</b> To generate and develop ideas for a new smoothie through talking, drawing, template and mock-ups <b>Make</b> To use the basic principles of a healthy and varied diet to prepare <u>fruit and vegetable smoothies</u> <b>Evaluate</b> To explore and evaluate a range of existing smoothies To evaluate their design against the design criteria <b>Technical Knowledge</b> To understand where food comes from</p>		<p><b>Design</b> To understand and apply the principles of healthy and varied diet <b>Make</b> To prepare and cook a variety of <u>healthy snacks (Flapjacks)</u> using a range of cooking techniques To select from a wider range of components including ingredients To select from a and use a wider range of tools and equipment for practical tasks e.g. cutting <b>Evaluate</b> To evaluate their ideas and products against their own design criteria To consider the views of others to improve their work <b>Technical Knowledge</b> To understand seasonality, knowing where and how a variety of ingredients are grown, reared, caught and processed</p>			<p><b>Design</b> To understand and apply the principles of healthy and varied diet <b>Make</b> To prepare and cook <u>bread and pizza dishes</u> using a range of cooking techniques To select from a wider range of components including ingredients To select from a and use a wider range of tools and equipment for practical tasks e.g. cutting <b>Evaluate</b> To evaluate their ideas and products against their own design criteria To consider the views of others to improve their work <b>Technical Knowledge</b> To understand seasonality, knowing where and how a variety of ingredients are grown, reared, caught and processed</p>



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## Mechanisms

Through creative and practical activities pupils should be taught the knowledge and skills of interactive process of designing and making. These should work in a range of relevant contexts

Curriculum Strand	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	<p><b>ELG –</b></p> <p>To be confident to try new activities and show independence, resilience and perseverance in the face of challenge</p> <p>To begin to show accuracy and care when drawing</p> <p>To safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function</p> <p>To share their creations, explaining the process they have used</p> <p>To use a range of small tools, including scissors, paint brushes and cutlery</p>	<p><b>Design</b></p> <p>To design purposeful, functional and appealing <u>moving pictures using levers, sliders and winders</u> for themselves and other users based on design criteria</p> <p>To generate, develop, model and communicate ideas through talking, drawing, templates, mock-ups and, where appropriate, communication technology</p> <p><b>Make</b></p> <p>To select from a range of tools and equipment to perform practical tasks e.g. cutting, shaping, joining and finishing</p> <p><b>Evaluate</b></p> <p>To explore and evaluate a range of existing products</p> <p>To evaluate their ideas against the design criteria</p> <p><b>Technical Knowledge</b></p> <p>To explore and use mechanisms in their products e.g., levers, sliders, wheels and axles</p>	<p><b>Design</b></p> <p>To design purposeful, functional and appealing <u>vehicles with wheels and axles</u> for themselves and other users based on design criteria</p> <p>To generate, develop, model and communicate ideas through talking, drawing, templates, mock-ups and, where appropriate, communication technology</p> <p><b>Make</b></p> <p>To select from a range of tools and equipment to perform practical tasks e.g., cutting, shaping, joining and finishing</p> <p><b>Evaluate</b></p> <p>To explore and evaluate a range of existing products</p> <p>To evaluate their ideas against the design criteria</p> <p><b>Technical Knowledge</b></p> <p>To explore and use mechanisms in their products e.g., levers, sliders, wheels and axles</p>	<p><b>Design</b></p> <p>To use research and develop design criteria to inform the design of <u>moving monsters using a pneumatic system</u> that are fit for purpose and aimed at individuals or groups</p> <p>To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design</p> <p><b>Make</b></p> <p>To select from and use a wider range of tools and equipment to perform practical tasks accurately e.g., cutting, shaping, joining and finishing</p> <p>To select from a wider range of materials and components, including construction materials, textiles and ingredients, according to properties and aesthetic qualities</p> <p><b>Evaluate</b></p> <p>To investigate and analyse a range of existing products</p>	<p><b>Design</b></p> <p>To use research and develop design criteria to inform the design of <u>moving books with levers and linkages</u> that are fit for purpose and aimed at individuals or groups</p> <p>To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design</p> <p><b>Make</b></p> <p>To select from and use a wider range of tools and equipment to perform practical tasks accurately e.g., cutting, shaping, joining, and finishing</p> <p>To select from a wider range of materials and components, including construction materials, textiles and ingredients, according to properties and aesthetic qualities</p> <p><b>Evaluate</b></p> <p>To investigate and analyse a range of existing products</p>	<p><b>Design</b></p> <p>To use research and develop design criteria to inform the design of <u>moving toys with cam mechanisms</u> that are fit for purpose and aimed at individuals or groups</p> <p>To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design</p> <p><b>Make</b></p> <p>To select from and use a wider range of tools and equipment to perform practical tasks accurately e.g., cutting, shaping, joining, and finishing</p> <p>To select from a wider range of materials and components, including construction materials, textiles and ingredients, according to properties and aesthetic qualities</p> <p><b>Evaluate</b></p> <p>To investigate and analyse a range of existing products</p>	



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				<p>To evaluate their ideas and products against their own design criteria</p> <p>To consider the views of others to improve their work</p> <p>To understand how key events and individuals in design and technology have helped shape the world</p> <p><b>Technical Knowledge</b></p> <p>To understand the use of mechanical systems in their products e.g., gears, pulleys, cams, levers and linkages</p>	<p>analyse a range of existing products</p> <p>To evaluate their ideas and products against their own design criteria</p> <p>To consider the views of others to improve their work</p> <p>To understand how key events and individuals in design and technology have helped shape the world</p> <p><b>Technical Knowledge</b></p> <p>To understand the use of mechanical systems in their products e.g., gears, pulleys, cams, levers and linkages</p>	<p>To evaluate their ideas and products against their own design criteria</p> <p>To consider the views of others to improve their work</p> <p>To understand how key events and individuals in design and technology have helped shape the world</p> <p><b>Technical Knowledge</b></p> <p>To understand the use of mechanical systems in their products e.g., gears, pulleys, cams, levers and linkages</p>	
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## Structures

Through creative and practical activities pupils should be taught the knowledge and skills of interactive process of designing and making. These should work in a range of relevant contexts

Curriculum Strand	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	<p><b>ELG –</b> To be confident to try new activities and show independence, resilience and perseverance in the face of challenge To begin to show accuracy and care when drawing To safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function To share their creations, explaining the process they have used To use a range of small tools, including scissors, paint brushes and cutlery</p>		<p><b>Design</b> To design purposeful, functional and appealing <u>homes and bug hotels</u> for themselves and other users based on design criteria To generate, develop, model and communicate ideas through talking, drawing, templates, mock-ups and, where appropriate, communication technology <b>Make</b> To select from a range of tools and equipment to perform practical tasks e.g., cutting, shaping, joining and finishing <b>Evaluate</b> To explore and evaluate a range of existing products To evaluate their ideas against the design criteria <b>Technical Knowledge</b> To build structures, exploring how they can be made stronger, stiffer and more stable</p>	<p><b>Design</b> To use research and develop design criteria to inform the design of <u>food packaging and bridges</u> that are fit for purpose and aimed at individuals or groups To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design <b>Make</b> To select from and use a wider range of tools and equipment to perform practical tasks accurately e.g., cutting, shaping, joining and finishing To select from a wider range of materials and components, including construction materials, textiles and ingredients, according to properties and aesthetic qualities <b>Evaluate</b> To investigate and analyse a range of existing products</p>	<p><b>Design</b> To use research and develop design criteria to inform the design of <u>musical instruments</u> that are fit for purpose and aimed at individuals or groups To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design <b>Make</b> To select from and use a wider range of tools and equipment to perform practical tasks accurately e.g., cutting, shaping, joining and finishing To select from a wider range of materials and components, including construction materials, textiles and ingredients, according to properties and aesthetic qualities <b>Evaluate</b> To investigate and analyse a range of</p>	<p><b>Design</b> To use research and develop design criteria to inform the design of <u>shelters</u> that are fit for purpose and aimed at individuals or groups To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design <b>Make</b> To select from and use a wider range of tools and equipment to perform practical tasks accurately e.g., cutting, shaping, joining and finishing To select from a wider range of materials and components, including construction materials, textiles and ingredients, according to properties and aesthetic qualities <b>Evaluate</b> To investigate and analyse a range of existing products To evaluate their ideas</p>	



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				<p>To evaluate their ideas and products against their own design criteria</p> <p>To consider the views of others to improve their work</p> <p>To understand how key events and individuals in design and technology have helped shape the world</p> <p><b>Technical Knowledge</b></p> <p>To apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p>	<p>existing products</p> <p>To evaluate their ideas and products against their own design criteria</p> <p>To consider the views of others to improve their work</p> <p>To understand how key events and individuals in design and technology have helped shape the world</p> <p><b>Technical Knowledge</b></p> <p>To apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p>	<p>and products against their own design criteria</p> <p>To consider the views of others to improve their work</p> <p>To understand how key events and individuals in design and technology have helped shape the world</p> <p><b>Technical Knowledge</b></p> <p>To apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p>	
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## Textiles

Through creative and practical activities pupils should be taught the knowledge and skills of interactive process of designing and making. These should work in a range of relevant contexts

Curriculum Strand	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	<p><b>ELG –</b> To be confident to try new activities and show independence, resilience and perseverance in the face of challenge To safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function To share their creations, explaining the process they have used To use a range of small tools, including scissors, paint brushes and cutlery</p>	<p><b>Design</b> To design purposeful, functional and appealing <u>puppets</u> for themselves and other users based on design criteria To generate, develop, and communicate ideas through talking, drawing and, where appropriate, communication technology <b>Make</b> To select from a range of tools and equipment to perform practical tasks e.g. for cutting, joining, shaping and finishing <b>Evaluate</b> To explore and evaluate a range of existing products To evaluate their ideas against the design criteria <b>Technical Knowledge</b></p>	<p><b>Design</b> To design purposeful, functional and appealing <u>T-shirts</u> for themselves and other users based on design criteria To generate, develop, and communicate ideas through talking, drawing and, where appropriate, communication technology <b>Make</b> To select from a range of tools and equipment to perform practical tasks e.g. for cutting, joining, shaping and finishing <b>Evaluate</b> To explore and evaluate a range of existing products To evaluate their ideas against the design criteria <b>Technical Knowledge</b></p>		<p><b>Design</b> To use research and develop design criteria to inform the design of <u>bags (decorative textile design project)</u> that are fit for purpose and aimed at individuals or groups To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design <b>Make</b> To select from and use a wider range of tools and equipment to perform practical tasks accurately e.g. cutting, shaping, joining and finishing To select from a wider range of materials and components, including materials and textiles according to properties and aesthetic qualities <b>Evaluate</b> To understand how key events and individuals in</p>	<p><b>Design</b> To use research and develop design criteria to inform the design of <u>a collage depicting buildings</u> that is fit for purpose and aimed at individuals or groups To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design <b>Make</b> To select from and use a wider range of tools and equipment to perform practical tasks accurately e.g. cutting, shaping, joining and finishing To select from a wider range of materials and components, including materials and textiles according to properties and aesthetic qualities <b>Evaluate</b> To investigate and analyse a range of existing products To evaluate their ideas</p>	<p><b>Design</b> To use research and develop design criteria to inform the design <u>pillow cases</u> that are fit for purpose and aimed at individuals or groups To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design <b>Make</b> To select from and use a wider range of tools and equipment to perform practical tasks accurately e.g. cutting, shaping, joining and finishing To select from a wider range of materials and components, including materials and textiles according to properties and aesthetic qualities <b>Evaluate</b> To investigate and analyse a range of existing products To evaluate their ideas and products against their</p>



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					design and technology have helped shape the world	and products against their own design criteria To consider the views of others to improve their work To understand how key events and individuals in design and technology have helped shape the world <b>Technical Knowledge</b> To apply their understanding of how to strengthen, stiffen and reinforce structures	own design criteria To consider the views of others to improve their work To understand how key events and individuals in design and technology have helped shape the world <b>Technical Knowledge</b>
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Electrical Systems							
Through creative and practical activities pupils should be taught the knowledge and skills of interactive process of designing and making. These should work in a range of relevant contexts							
Curriculum Strand	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
					<p><b>Design</b> To use research and develop design criteria to inform the design of <u>torches</u> that are fit for purpose and aimed at individuals or groups To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design</p> <p><b>Make</b> To select from and use a wider range of tools and equipment to perform practical tasks accurately e.g. cutting, shaping, joining and finishing To select from a wider range of materials and components, including construction materials, textiles and ingredients, according to properties and aesthetic qualities</p> <p><b>Evaluate</b> To investigate and analyse a range of existing products</p>		<p><b>Design</b> To use research and develop design criteria to inform the design of a functioning <u>fairground ride using a motor</u> that is fit for purpose and aimed at individuals or groups To generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer aided design</p> <p><b>Make</b> To select from and use a wider range of tools and equipment to perform practical tasks accurately e.g. cutting, shaping, joining, and finishing. To select from a wider range of materials and components, including construction materials, textiles and ingredients, according to properties and aesthetic qualities</p> <p><b>Evaluate</b> To investigate and analyse a range of existing products</p>





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					<p>To evaluate their ideas and products against their own design criteria</p> <p>To consider the views of others to improve their work</p> <p>To understand how key events and individuals in design and technology have helped shape the world</p> <p><b>Technical Knowledge</b></p> <p>To apply their understanding of computing to program, monitor and control their products</p>		<p>To evaluate their ideas and products against their own design criteria</p> <p>To consider the views of others to improve their work</p> <p>To understand how key events and individuals in design and technology have helped shape the world</p> <p><b>Technical Knowledge</b></p> <p>To apply their understanding of computing to program, monitor and control their products</p>
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