Chestnuts PRIMARY SCHOOL

Inspiring Futures through Learning

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	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	To use a wider range of vocabulary To understand why questions To understand a question or instruction that has two parts To choose the right resources to carry out their own plan To begin to describe a sequence of events, real or fictional, using words such as 'first', 'then...' To use all their senses in hands-on exploration of natural materials To explore collections of materials with similar and/or different properties To talk about the differences between materials and changes they notice To develop their own ideas and then decide which materials to use to express them To select and use activities and	To learn new vocabulary To use new vocabulary through the day To ask questions to find out more and to check they understand what has been said to them To articulate their ideas and thoughts in well-formed sentences To use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen To use new vocabulary in different contexts To develop small motor skills so that they can use a range of tools compentently, safely and confidently To select, rotate and manipulate shapes to develop spatial reasoning skills To compose and decompose shapes	**Research** To identify a fruit and a vegetable To know where fruits and vegetables grow **Skill Development** To know how to prepare soft fruit and vegetables with simple tools such as butter knives **Design** To taste and compare fruit and vegetables. To generate and develop ideas for a new smoothie based on their preferences **Make** To make a fruit and/or vegetable smoothie based on my design **Evaluate** To evaluate our smoothie based on existing products	**Research** To identify hidden sugars To identify different types of healthy Wraps **Skill Development** To know how to cut and prepare vegetables and use a range of techniques such as tearing and rolling **Design** To understand which food combinations go together To design my own wrap based on correct combinations **Make** To use equipment safely To make our own wrap based on my design **Evaluate** To evaluate our wrap based on our success criteria	**Research** To know that different seasons effect the growth of food To know the advantages of eating British seasonal food **Skill Development** To know how to prepare fruit and vegetables with tools such as sharp knives **Design** To design a recipe for a stew that is healthy and uses seasonal products **Make** To use a variety of techniques to create our seasonal stew **Evaluate** To evaluate our stew based on our success criteria and opinions of others.	**Research** To be able to follow a simple recipe for a biscuit **Skill Development** To know how to adapt a recipe **Design** To adapt the recipe followed for a biscuit To ensure the adapted recipe is within budget **Make** To use cooking techniques e.g. sieving and cooling To make a biscuit following the design brief **Evaluate** To evaluate our biscuits based on existing products within our budget	**Research** To understand the principles for a healthy diet To understand where meat comes from To compare two adapted bolognaise recipes based on nutritional value **Skill Development** To know how to prepare ingredients for a meal **Design** To understand that changing ingredients effects the nutritional values of meals To write an amended recipe to enhance the nutritional value of the meal **Make** To use equipment safely e.g. knives and hot pans To understand the term 'cross contamination' To create spaghetti bolognaise **Evaluate** To evaluate our	**Research** To research meals that complement each other To research a recipe based on chosen ingredients Research the equipment that Is needed to complete a recipe **Make - Starter** To create a starter that represents seasonal ingredients **Make – Main meal** To create a main meal that represents seasonal ingredients and good nutritional value **Make – Desert** To create a dessert using different equipment and cooking techniques

	resources, with help when needed which helps them to achieve a goal they have chosen, or one which is suggested to them	so that children recognise a shape can have other shapes within it To return to and build on their previous learning, refining ideas and developing their ability to represent them To create collaboratively, sharing ideas, resources and skills To show resilience and perseverance in the face of challenge					bolognaise based on existing products of a different nutritional value	
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	Nursery	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	To select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc To combine shapes to make new ones – an arch, a bigger triangle, etc To explore how things work To make imaginative and complex 'small worlds' with blocks and construction kits To explore different materials freely, to develop their ideas about how to use them and what	To learn new vocabulary To use new vocabulary through the day To ask questions to find out more and to check they understand what has been said to them To articulate their ideas and thoughts in well-formed sentences To use talk to help work out problems and organise thinking and activities, and to explain how things	**Research** To understand that there are different types of moving pictures To explore and test different types of moving pictures **Skill Development** To know how to create a simple slider To know how to make a simple lever To know how to make a simple winder **Design**	**Research** To know how and where a wheel and axle is used To explore a range of existing products that use a wheel and axel **Skill Development** To know how a wheel and axle are combined **Design** To design a functional and appealing moving vehicle that uses a	**Research** To research different pneumatic systems To understand how pneumatic systems work To understand that mechanisms work together to create a motion **Skill Development** To create a small pneumatic system **Design** To design a moving monster which uses a pneumatic system	**Research** To research different car chassis and understand how they work **Skill Development** To know how to make a chassis **Design** To use research and develop design criteria to inform the design of a slingshot car. To generate, develop, model and communicate their	**Research** To research different products that use cam mechanisms **Skill Development** To know how cam mechanisms are created **Design** To use research and develop design criteria to inform the design of moving toys with cam mechanisms that are fit for purpose. To generate,	

	to make To develop their own ideas and then decide which materials to use to express them To join different materials and explore different textures	work and why they might happen To use new vocabulary in different contexts To develop small motor skills so that they can use a range of tools competently, safely and confidently To select, rotate and manipulate shapes to develop spatial reasoning skills To compose and decompose shapes so that they recognise a shape can have other shapes within it To return to and build on their previous learning, refining ideas and developing their ability to represent them To create collaboratively, sharing ideas, resources and skills. To show resilience and perseverance in the face of challenge	To design a picture with a moving part **Make** To create a picture using a moving part To use a range of tools and equipment **Evaluate** To evaluate a moving picture against a success criteria	wheel and axel To communicate our ideas through voice and drawings **Make** To build a moving car with a wheel and axel To use a range of tools and equipment **Evaluate** To evaluate our moving car against our success criteria	To develop a design criteria to inform the design of a pneumatic monster **Make** To create a monster which uses a pneumatic system To select from a wide range of materials according to their functional properties and aesthetic qualities **Evaluate** To evaluate our pneumatic monsters based on our success criteria and opinions of others.	ideas through discussions and annotations **Make** To create a slingshot car that uses a chassis To select from and use a wider range of tools and equipment to perform practical tasks accurately To select from a wider range of materials and components, including construction materials, according to properties and aesthetic qualities **Evaluate** To evaluate their ideas and products against their own design criteria To consider the views of others to improve their work	develop, model and communicate their ideas through discussions and annotations **Make** To create a moving toy with a cam mechanism To select from and use a wider range of tools and equipment To select from a wider range of materials and components, including construction materials, according to properties and aesthetic qualities **Evaluate** To evaluate their ideas and products against their own design criteria To consider the views of others to improve their work	

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	Nursery	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	To use a wider range of vocabulary To understand why	To develop their small motor skills so that they can use a	**Research** To explore different stable structures	**Research** To research and	**Research** To research and		**Research** To research different	

	questions To use one-handed tools and equipment, for example, making snips in paper with scissors To select shapes appropriately: flat surfaces for building, a triangular prism for a roof, etc To combine shapes to make new ones - an arch, a bigger triangle, etc To explore and talk about different forces they can feel	range of tools competently, safely and confidently To learn new vocabulary To use new vocabulary through the day To ask questions to find out more and to check they understand what has been said to them To articulate their ideas and thoughts in well-formed sentences To use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen To use new vocabulary in different contexts To select, rotate and manipulate shapes to develop spatial reasoning skills To compose and decompose shapes so that they recognise a shape can have other shapes within it To return to and build on their previous learning, refining ideas and developing their	To explore and test a windmill **Skill Development** To know how to form a cylinder **Design** To design a purposeful and functional windmill To communicate our own ideas for our windmill **Make** To select from and use a range of tools To select from a range of materials and components **Evaluate** To evaluate our windmill against a success criteria	identify stable and unstable structures **Skill Development** To know how to create multiple 3D shapes **Design** To design a functional stable chair To communicate our ideas through voice and drawings **Make** To build a stable chair To use a range of tools and equipment **Evaluate** To evaluate a stable chair against our success criteria	evaluate different types of bridges To research how different geometric shapes form stronger structures **Skill Development** To create geometric shapes **Design** To design a stable bridge which uses different geometric shapes To use a design criteria to inform the design of a bridge **Make** To create a bridge which uses different geometric shapes To select from a wide range of materials according to their functional properties **Evaluate** To evaluate our bridges based on our success criteria and opinions of others		earthquake proof buildings To identify stronger and weaker shapes **Skill Development** To create a range of shapes and know if these are weaker or stronger **Design** To use research and develop design criteria to inform the design of an earthquake proof building that use shapes that are fit for purpose. To generate, develop, model and communicate their ideas through discussions and annotations **Make** To create an earthquake proof building To select from and use a wider range of tools and equipment To select from a wider range of materials and components, including construction materials, according	

		ability to represent them To create collaboratively, sharing ideas, resources and skills To show resilience and perseverance in the face of challenge					to properties and aesthetic qualities **Evaluate** To evaluate their ideas and products against their own design criteria To consider the views of others to improve their work	
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	Nursery	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	To use a wider range of vocabulary To understand why questions To use one-handed tools and equipment, for example, making snips in paper with scissors	To learn new vocabulary To use new vocabulary through the day To ask questions to find out more and to check they understand what has been said to them To articulate their ideas and thoughts in well-formed sentences To use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen To use new vocabulary in different contexts To develop small motor skills so that they can use a range	**Research** To explore different types of puppets and understand how they function **Skill development** To know how to join fabric with various equipment such as fabric glue **Design** To design a purposeful and functional puppet To communicate our own ideas for our puppet **Make** To select from and use a range of tools To select from a range of materials and components To join fabrics together using	**Research** To explore different types of bags and how they are put together **Skill Development** To know how to form a running stitch **Design** To design a purposeful and functional bag To communicate our own ideas for our bag **Make** To use a running stitch to join fabric together To select from and use a range of tools To select from a range of materials and components To join fabrics together **Evaluate**	**Research** To explore the two different types of stitching – running and cross stitch **Skill Development** To know how to form a cross stitch **Design** To design a cross stitch square which uses cross stitching **Make** To create a cross stitch square which shows a design To select from a wide range of materials according to their aesthetic properties **Evaluate** To evaluate our squares based on	**Research** To explore different cushion designs **Skill Development** To know how to apply appliques **Design** To design a purposeful and functional cushion To use a design criteria to inform the design of a cushion **Make** To decorate fabric with appliques and cross stitching To select from a wide range of materials according to their aesthetic properties **Evaluate** To evaluate our cushions based on	**Research** To explore different stuffed toys and how they are stitched **Skill Development** To know how to apply a blanket stitch **Design** To use research and develop design criteria to inform the design of a stuffed toy that are fit for purpose. To generate, develop, model and communicate their ideas through discussions and annotations **Make** To create a stuffed toy that uses a	**Research** To explore different types of fastenings an understand how they work **Skill Development** To know how to apply a fastening **Design** To use research and develop design criteria to inform the design of a book sleeve that is fit for purpose To generate, develop, model and communicate their ideas through discussions and annotations **Make** To create a book sleeve that in

		of tools competently, safely and confidently To select, rotate and manipulate shapes to develop spatial reasoning skills To compose and decompose shapes so that they recognise a shape can have other shapes within it To return to and build on their previous learning, refining ideas and developing their ability to represent them To create collaboratively, sharing ideas, resources and skills To show resilience and perseverance in the face of challenge	staples, glue and pins **Evaluate** To evaluate our puppets against a success criteria	To evaluate our bags against a success criteria	our success criteria and opinions of others	our success criteria and opinions of others	blanket stitch To select from and use a wider range of tools and equipment To select from a wider range of materials and components, including construction materials, according to properties and aesthetic qualities **Evaluate** To evaluate their ideas and products against their own design criteria To consider the views of others to improve their work	cooperates a fastening 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 **Evaluate** To evaluate their ideas and products against their own design criteria To consider the views of others to improve their work

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	Nursery	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
	To use a wider range of vocabulary To understand why questions	To learn new vocabulary To use new vocabulary To use new vocabulary through				**Research** To explore different types of torches and understand how they work **Skill Development**		**Research** To explore fairground rides and look at how they work and move **Skill Development**

		the day To ask questions to find out more and to check they understand what has been said to them To articulate their ideas and thoughts in well-formed sentences To use talk to help work out problems and organise thinking and activities, and to explain how things work and why they might happen				To know how to form a complete electrical circuit **Design** To use research and develop design criteria to inform the design of a torch that is functional and fit for purpose To generate, develop, model and communicate their ideas through discussions and annotations **Make** To create a torch that is functional To select from and use a wider range of tools and equipment To select from a wider range of materials and components, including construction materials, according to properties. **Evaluate** To evaluate their ideas and products against their own design criteria To consider the views of others		To know how to make an object move with an electrical circuit **Design** To use research and develop design criteria to inform the design of a fairground ride that is fit for purpose To generate, develop, model and communicate their ideas through discussions and annotations **Make** To create a fairground ride that is functional and appealing 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

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