

**Bitterley Church of England Primary School**  
 "Be courageous; be strong. Do everything in love" (1 Corinthians 16:13-14)



Coverage and progression across cycles A and B

<u>Willows Autumn</u>	Junk modelling Reception	Bookmarks Reception
<u>Physical development</u>	-Develop small motor skills so that they can use a range of tools competently, safely and confidently. -ELG: Fine Motor Skills> Use a range of small tools, including scissors, paint brushes and cutlery.	-Develop small motor skills so that they can use a range of tools competently, safely and confidently. -ELG: Fine Motor Skills> Use a range of small tools, including scissors, paint brushes and cutlery.
Expressive Arts and Design	-Explore, use and refine a variety of artistic effects to express 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. -ELG: Creating with materials> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. -ELG: Creating with materials> Share their creations, explaining the process they have used.	-Explore, use and refine a variety of artistic effects to express ideas and feelings. -Return to and build on their previous learning, refining ideas and developing their ability to represent them. -ELG: Creating with materials> Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function. -ELG: Creating with materials> Share their creations, explaining the process they have used.
<u>Willows Spring</u>	Puppets Year 1	Wheels and Axles Year 1
<u>Design</u>	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.	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.
<u>Make</u>	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.	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.
<u>Evaluate</u>	Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria.	Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria.
<u>Knowledge</u>	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 use mechanisms [for example, levers, sliders, wheels and axles], in their products.
<u>Willows Summer</u>	Smoothies year 1	Make a Windmill year 1
<u>Design</u>	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.	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.

<u>Make</u>	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.	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.
<u>Evaluate</u>	Evaluate their ideas and products against design criteria.	Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria.
<u>Knowledge</u>	Understand where food comes from	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.
<u>Maples Autumn</u>	<i>Making a moving monster</i>	<i>Making a moving monster</i>
<u>Design</u>	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.	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.
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<u>Knowledge</u>	Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.
<u>Maples Spring</u>	<i>Mechanisms: Fairground wheel</i>	<i>Mechanisms: Fairground wheel</i>
<u>Design</u>	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.	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.
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<u>Evaluate</u>	Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria.	Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria.
<u>Technical</u>	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.	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.
<u>Maples Summer</u>	Cooking and nutrition: A balanced diet link seasons link geography what is it like here	Cooking and nutrition: A balanced diet link seasons link geography what is it like here
<u>Design</u>	Designing a healthy wrap based on a food combination which works well together.	Designing a healthy wrap based on a food combination which works well together.

<u>Make</u>	<ul style="list-style-type: none"> <li>• Slicing food safely using the bridge or claw grip.</li> <li>• Constructing a wrap that meets a design brief.</li> </ul>	<ul style="list-style-type: none"> <li>• Slicing food safely using the bridge or claw grip.</li> <li>• Constructing a wrap that meets a design brief.</li> </ul>
<u>Evaluate</u>	<ul style="list-style-type: none"> <li>• Describing the taste, texture and smell of fruit and vegetables.</li> <li>• Taste testing food combinations and final products.</li> <li>• Describing the information that should be included on a label.</li> <li>• Evaluating which grip was most effective.</li> </ul>	<ul style="list-style-type: none"> <li>• Describing the taste, texture and smell of fruit and vegetables.</li> <li>• Taste testing food combinations and final products.</li> <li>• Describing the information that should be included on a label.</li> <li>• Evaluating which grip was most effective.</li> </ul>
<u>Technical</u>	<ul style="list-style-type: none"> <li>• To know that 'diet' means the food and drink that a person or animal usually eats.</li> <li>• To understand what makes a balanced diet</li> <li>• To know where to find the nutritional information on packaging.</li> <li>• To know that the five main food groups are: Carbohydrates, fruits and vegetables, protein, dairy and foods high in fat and sugar.</li> <li>• To understand that I should eat a range of different foods from each food group, and roughly how much of each food group.</li> <li>• To know that nutrients are substances in food that all living things need to make energy, grow and develop.</li> <li>• To know that 'ingredients' means the items in a mixture or recipe.</li> <li>• To know that I should only have a maximum of five teaspoons of sugar a day to stay healthy.</li> <li>• To know that many food and drinks we do not expect to contain sugar do; we call these 'hidden sugars'.</li> </ul>	<ul style="list-style-type: none"> <li>• To know that 'diet' means the food and drink that a person or animal usually eats.</li> <li>• To understand what makes a balanced diet</li> <li>• To know where to find the nutritional information on packaging.</li> <li>• To know that the five main food groups are: Carbohydrates, fruits and vegetables, protein, dairy and foods high in fat and sugar.</li> <li>• To understand that I should eat a range of different foods from each food group, and roughly how much of each food group.</li> <li>• To know that nutrients are substances in food that all living things need to make energy, grow and develop.</li> <li>• To know that 'ingredients' means the items in a mixture or recipe.</li> <li>• To know that I should only have a maximum of five teaspoons of sugar a day to stay healthy.</li> <li>• To know that many food and drinks we do not expect to contain sugar do; we call these 'hidden sugars'.</li> </ul>
<u>Additional</u>	<p>Use basic principles of a healthy and varied diet to prepare dishes.</p> <p>Understand where food comes from.</p>	<p>Use basic principles of a healthy and varied diet to prepare dishes.</p> <p>Understand where food comes from.</p>

<u>Firs Autumn</u>	Mechanical systems: Pneumatic toys	Digital world: Mindful moments timer
<u>Design</u>	<p>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.</p> <p>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>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.</p>
<u>Make</u>	Select from and use a wider range of tools and equipment to	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.	perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.
<i>Evaluate</i>	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.	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.
<i>Technical</i>	Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].	Apply their understanding of computing to program, monitor and control their products.
<i>Additional</i>		<ul style="list-style-type: none"> <li>•To understand the terms 'ergonomic' and 'aesthetic'.</li> <li>•To know that a prototype is a 3D model made out of cheap materials, that allows us to test design ideas and make better decisions about size, shape and materials.</li> </ul>
<i>Spring</i>	Electrical: Torches	Constructing a castle
<i>Design</i>	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 computeraided 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, prototypes, pattern pieces and computer- aided design.
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<i>Technical</i>	Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].	Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.
<i>Additional</i>		
<i>Summer</i>	Cross stitch and appliqué Textiles: Cushions or Egyptian collars link Egyptians	Cooking and nutrition: Adapting a recipe link science and history
<i>Design</i>	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, prototypes, pattern pieces and computeraided design.
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	according to their characteristics.	ingredients, according to their characteristics.
<u>Evaluate</u>	Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.	Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques.
<u>Technical</u>	<ul style="list-style-type: none"> <li>•To know that applique is a way of mending or decorating a textile by applying smaller pieces of fabric to larger pieces.</li> <li>•To know that when two edges of fabric have been joined together it is called a seam.</li> <li>•To know that it is important to leave space on the fabric for the seam.</li> <li>•To understand that some products are turned inside out after sewing so the stitching is hidden.</li> </ul>	<ul style="list-style-type: none"> <li>• To know that the amount of an ingredient in a recipe is known as the 'quantity.'</li> <li>• To know that it is important to use oven gloves when removing hot food from an oven.</li> <li>• To know the following cooking techniques: sieving, creaming, rubbing method, cooling.</li> <li>•To understand the importance of budgeting while planning ingredients for biscuits.</li> </ul>
<u>Additional</u>		

<u>Oaks Autumn</u>	Electrical systems: Steady hand game link science	Textiles: Stuffed Toys link WW2
<u>Design</u>	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, prototypes, pattern pieces and computer- aided design.
<u>Make</u>	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.	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.
<u>Evaluate</u>	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.	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.
<u>Technical</u>	Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].	<ul style="list-style-type: none"> <li>• To know that blanket stitch is useful to reinforce the edges of a fabric material or join two pieces of fabric.</li> <li>• To understand that it is easier to finish simpler designs to a high standard.</li> <li>• To know that soft toys are often made by creating appendages separately and then attaching them to the main body.</li> </ul>

		<ul style="list-style-type: none"> <li>• To know that small, neat stitches which are pulled taut are important to ensure that the soft toy is strong and holds the stuffing securely.</li> </ul>
<u>Additional</u>	<ul style="list-style-type: none"> <li>• To know that 'form' means the shape and appearance of an object.</li> <li>• To know the difference between 'form' and 'function'.</li> <li>• To understand that 'fit for purpose' means that a product works how it should and is easy to use.</li> <li>• To know that form over purpose means that a product looks good but does not work very well.</li> <li>• To know the importance of 'form follows function' when designing: the product must be designed primarily with the function in mind.</li> <li>• To understand the diagram perspectives 'top view', 'side view' and 'back'.</li> </ul>	
<u>Design</u>	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, prototypes, pattern pieces and computer-aided design.
<u>Oaks Spring</u>	Structures: Bridges	Navigating the World
<u>Make</u>	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.	Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.
<u>Evaluate</u>	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.	Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.
<u>Technical</u>	Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.	Apply their understanding of computing to program, monitor and control their products.
<u>Additional</u>	<ul style="list-style-type: none"> <li>• To understand the difference between arch, beam, truss and suspension bridges.</li> <li>• To understand how to carry and use a saw safely.</li> </ul>	<ul style="list-style-type: none"> <li>• To know that designers write design briefs and develop design criteria to enable them to fulfil a client's request.</li> <li>• To know that 'multifunctional' means an object or product has more than one function.</li> <li>• To know that magnetometers are devices that measure the Earth's magnetic field to determine which direction you are facing.</li> </ul>
<u>Summer</u>	Cooking and nutrition: What could be healthier? Link Tudor food	Mechanical systems: Automata toys
<u>Design</u>	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, prototypes, pattern pieces and computer-aided design.
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	including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.	
<u>Evaluate</u>	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.	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.
<u>Technical</u>	Apply their understanding of computing to program, monitor and control their products.	Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].
<u>Additional</u>	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.	<ul style="list-style-type: none"> <li>• To know that an automata is a hand powered mechanical toy.</li> <li>• To know that a cross-sectional diagram shows the inner workings of a product.</li> <li>• To understand how to use a bench hook and saw safely.</li> <li>• To know that a set square can be used to help mark 90° angles.</li> </ul>