



Bitterley School Progression of skills and knowledge: Food and nutrition

	EYFS / year 1	Year 2	Year 3/4	Year 5/6
	Explore and become familiar with different fruits and vegetables, using their senses.			
<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.	Designing a healthy wrap based on a food combination which works well together.	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.	<ul style="list-style-type: none"> 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 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.	<ul style="list-style-type: none"> Slicing food safely using the bridge or claw grip. Constructing a wrap that meets a design brief. 	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.	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 <ul style="list-style-type: none"> • their functional properties and aesthetic qualities.
<u>Evaluate</u>	Evaluate their ideas and products against design criteria.	<ul style="list-style-type: none"> • Describing the taste, texture and smell of fruit and vegetables. • Taste testing food combinations and final products. • Describing the information that should be included on a label. • Evaluating which grip was most effective. 	Prepare and cook variety of predominantly savoury dishes using a range of cooking techniques.	Investigate and analyse a range of existing products. Evaluate their ideas and products against their own design criteria <ul style="list-style-type: none"> • and consider the views of others to improve their work.

<p><u>Knowledge</u></p>	<p>Understand where food comes from</p>	<ul style="list-style-type: none"> • To know that ‘diet’ means the food and drink that a person or animal usually eats. • To understand what makes a balanced diet • To know where to find the nutritional information on packaging. • To know that the five main food groups are: Carbohydrates, fruits and vegetables, protein, dairy and foods high in fat and sugar. • To understand that I should eat a range of different foods from each food group, and roughly how much of each food group. • To know that nutrients are substances in food that all living things need to make energy, grow and develop. • To know that ‘ingredients’ means the items in a mixture or recipe. • To know that I should only have a maximum of five teaspoons of sugar a day to stay healthy. • To know that many food and drinks we do not expect to contain sugar do; we call these ‘hidden sugars’. 	<ul style="list-style-type: none"> • To know that the amount of an ingredient in a recipe is known as the ‘quantity.’ • To know that it is important to use oven gloves when removing hot food from an oven. • To know the following cooking techniques: sieving, creaming, rubbing method, cooling. • To understand the importance of budgeting while planning ingredients for biscuits. 	<p>Understand and apply principles of a healthy and varied diet</p> <p>Prepare and cook variety of predominantly savoury dishes using a</p> <p>range of cooking techniques. Understand seasonality, and know where and how a variety of</p> <ul style="list-style-type: none"> • ingredients are grown, reared, caught and processed.
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	EYFS / year 1	Year 2	Year 3/4	Year 5/6
	<p>-Develop small motor skills so that they can use a range of tools competently, safely and confidently.</p> <p>-ELG: Fine Motor Skills> Use a range of small tools, including scissors, paint brushes and cutlery.</p>			
<u>Design</u>	<p>Design purposeful, functional, appealing products for themselves and other users based on design criteria.</p> <p>Generate, develop, model and communicate their ideas through talking, drawing, templates, mock- ups and, where appropriate, information and communication technology.</p>	<p>Design purposeful, functional, appealing products for themselves and other users based on design criteria.</p> <p>Generate, develop, model and communicate their ideas through talking, drawing, templates, mock- ups and, where appropriate, information and communication technology.</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> <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>	
<u>Make</u>	<p>Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].</p> <p>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p>	<p>Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].</p> <p>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p>	<p>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</p> <p>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p>	<p>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</p> <p>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.</p>

<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.	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>			Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.	Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.

Bitterley School Progression of skills and knowledge: Mechanisms

	EYFS / year 1	Year 2	Year 3/4	Year 5/6
	<p>-Develop small motor skills so that they can use a range of tools competently, safely and confidently.</p> <p>-ELG: Fine Motor Skills> Use a range of small tools, including scissors, paint brushes and cutlery.</p>			
<u>Design</u>	<p>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.</p>	<p>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.</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> <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> <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>
<u>Make</u>	<p>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</p>	<p>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.</p>	<p>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</p> <p>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p>	<p>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</p>

	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.	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. Understand how key events and individuals in design and technology have helped shape the world.
<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.	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>Technical</u>			Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].	Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].

Bitterley School Progression of skills and knowledge: Textiles

	EYFS / year 1	Year 2	Year 3/4	Year 5/6
	<p>-Develop small motor skills so that they can use a range of tools competently, safely and confidently.</p> <p>-ELG: Fine Motor Skills> Use a range of small tools, including scissors, paint brushes and cutlery.</p>			
<u>Design</u>	<p>Design purposeful, functional, appealing products for themselves and other users based on design criteria.</p> <p>Generate, develop, model and communicate their ideas through talking, drawing, templates, mock- ups and, where appropriate, information and communication technology.</p>	<p>Design purposeful, functional, appealing products for themselves and other users based on design criteria.</p> <p>Generate, develop, model and communicate their ideas through talking, drawing, templates, mock- ups and, where appropriate, information and communication technology.</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> <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> <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>

<u>Make</u>	<p>Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].</p> <p>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p>	<p>Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].</p> <p>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p>	<p>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</p> <p>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p>	<p>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</p> <p>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.</p>
<u>Evaluate</u>	<p>Explore and evaluate a range of existing products.</p> <p>Evaluate their ideas and products against design criteria.</p>	<p>Explore and evaluate a range of existing products.</p> <p>Evaluate their ideas and products against design criteria.</p>	<p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p>	<p>Investigate and analyse a range of existing products.</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.</p>
<u>Knowledge</u>	<p>Build structures, exploring how they can be made stronger, stiffer and more stable.</p> <p>Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p>	<p>Build structures, exploring how they can be made stronger, stiffer and more stable.</p> <p>Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p>		
<u>Technical</u>			<ul style="list-style-type: none"> • To know that applique is a way of mending or decorating a textile by applying smaller pieces of fabric to larger pieces. 	<ul style="list-style-type: none"> • To know that blanket stitch is useful to reinforce the edges of a fabric material or join two pieces of fabric. • To understand that it is easier to finish simpler designs to a high

			<ul style="list-style-type: none"> •To know that when two edges of fabric have been joined together it is called a seam. •To know that it is important to leave space on the fabric for the seam. •To understand that some products are turned inside out after sewing so the stitching is hidden. 	standard. <ul style="list-style-type: none"> • To know that soft toys are often made by creating appendages separately and then attaching them to the main body. • 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.
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Bitterley School Progression of skills and knowledge: Electrical systems

	Year 3/4	Year 5/6
<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 computeraided 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> <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>
<u>Make</u>	<p>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</p> <p>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics.</p>	<p>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately.</p> <p>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.</p>

<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. Understand how key events and individuals in design and technology have helped shape the world.
<u>Technical</u>	Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].	Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].

Bitterley School Progression of skills and knowledge: Digital World (KS2 only)

	Year 3/4	Year 5/6
<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.	
<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 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 computing to program, monitor and control their products.	Apply their understanding of computing to program, monitor and control their products. <ul style="list-style-type: none">• To know that designers write design briefs and develop design criteria to enable them to fulfil a client's request.• To know that 'multifunctional' means an object or product has more than one function.• To know that magnetometers are devices that measure the Earth's magnetic field to determine which direction you are facing.