

	Autumn	Spring	Summer																				
Reception	<p>Programming the Bee-Bots. Food changes. Taking photos. Junk modelling.</p>	<p>Create their own shows and record them. Using the ipads to record shows. Observation table.</p>	<p>Designing and building vehicle junk box models. Make ice-cream and ice lollies Ipad - video of how to make ice-cream. Build a wormery.</p>																				
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<p>Year 1</p>	<p><u>Moving Pictures</u> <u>National Curriculum</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. 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. Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria. 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. Use the basic principles of a healthy and varied diet to prepare dishes. understand where food comes from.</p>	<p><u>Homes</u> <u>National Curriculum</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 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. Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria. 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. Use the basic principles of a healthy and varied diet to prepare dishes. understand where food comes from.</p>	<p><u>Eat more fruit</u> <u>National Curriculum</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 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. Explore and evaluate a range of existing products. Evaluate their ideas and products against design criteria. 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. Use the basic principles of a healthy and varied diet to prepare dishes. understand where food comes from.</p>

Knowledge			
<u>Technical Knowledge – materials and structures</u>	<u>Technical Knowledge – mechanisms</u>	<u>Technical Knowledge – textiles</u>	<u>Technical Knowledge – food and nutrition</u>
Begin to measure and join materials, with some support. Describe differences in materials. Suggest ways to make material/product stronger.	Begin to use levers or slides.	Measure, cut and join textiles to make a product, with some support. Choose suitable textiles.	wash hands & clean surfaces Think of interesting ways to decorate food. Say where some foods come from, (i.e. plant or animal) Describe differences between some food groups (i.e. sweet, vegetable etc.) Discuss how fruit and vegetables are healthy. Cut, peel and grate safely, with support.
Design		Make	Evaluate
Have own ideas. Explain what I want to do. Explain what my product is for, and how it will work. Use pictures and words to plan, begin to use models. Design a product for myself following design criteria. Research similar existing products		Explain what I'm making and why. Consider what I need to do next. Select tools/equipment to cut, shape, join, finish and explain choices. Measure, mark out, cut and shape, with support. Choose suitable materials and explain choices. Try to use finishing techniques to make product look good. Work in a safe and hygienic manner	Talk about my work, linking it to what I was asked to do. Talk about existing products considering use, materials, how they work, audience, where they might be used. Talk about existing products and say what is and isn't good. Talk about things that other people have made Begin to talk about what could make product better.
Locality Trip to Morrisons to buy the ingredients for their food topic.			
Diversity Who designs, builds and decorates our homes?			

<p>Year 2</p>	<p>Puppets National Curriculum 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 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 Explore and evaluate a range of existing products Evaluate their ideas and products against design criteria 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 Use the basic principles of a healthy and varied diet to prepare dishes understand where food comes from.</p>	<p>Vehicles National Curriculum 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 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 Explore and evaluate a range of existing products Evaluate their ideas and products against design criteria 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 Use the basic principles of a healthy and varied diet to prepare dishes understand where food comes from.</p>	<p>Perfect Pizza National Curriculum 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 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 Explore and evaluate a range of existing products Evaluate their ideas and products against design criteria 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 Use the basic principles of a healthy and varied diet to prepare dishes understand where food comes from.</p>									
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<p>Describe some different characteristics of materials. Join materials in different ways. Use joining, rolling or folding to make it stronger. Use own ideas to try to make product stronger.</p>	<p>Begin to understand how to use wheels and axles.</p>	<p>Join textiles together to make a product, and explain how I did it Carefully cut textiles to produce accurate pieces. Explain choices of textile Understand that a 3D textile structure can be made from two identical fabric shapes.</p>	<p>hygienic kitchen. Describe properties of ingredients and importance of varied diet. Say where food comes from (animal, underground etc.) Describe how food is farmed, home-grown, caught. Draws eat well plate; explain there are groups of food. Describe "five a day". Cut, peel and grate with increasing confidence.</p>
<p>Skills</p>			
<p>Design</p> <p>Have own ideas and plan what to do next. Explain what I want to do and describe how I may do it. Explain purpose of product, how it will work and how it will be suitable for the user. Describe design using pictures, words, models, diagrams, begin to use ICT. Design products for myself and others following design criteria. Choose best tools and materials and explain choices. Use knowledge of existing products to produce ideas.</p>		<p>Make</p> <p>Explain what I am making and why it fits the purpose. Make suggestions as to what I need to do next. Join materials/components together in different ways. Measure, mark out, cut and shape materials and components, with support. Describe which tools I'm using and why. Choose suitable materials and explain choices depending on characteristics. Use finishing techniques to make product look good. Work safely and hygienically.</p>	<p>Evaluate</p> <p>Describe what went well, thinking about design criteria. Talk about existing products considering use, materials, how they work, audience, where they might be used, express opinion. Evaluate how good existing products are. Talk about what I would do differently if I were to do it again and why.</p>
<p>Locality Trip to Morrisons to buy the ingredients for their food topic.</p> <p>Diversity Who do our puppets represent? Who uses puppets? Vehicles: their origin and popularity around the world.</p>			

Year 3	Photo Frames	Pneumatics	Sandwich Snacks
	<p><u>National Curriculum</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 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. 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. Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] Apply their understanding of computing to program, monitor and control their products. Understand and apply the principles of a healthy and varied diet Prepare and cook a 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</p>	<p><u>National Curriculum</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. 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 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 Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] Apply their understanding of computing to program, monitor and control their products. Understand and apply the principles of a healthy and varied diet Prepare and cook a variety of predominantly</p>	<p><u>National Curriculum</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. 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 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 Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] Apply their understanding of computing to program, monitor and control their products. Understand and apply the principles of a healthy and varied diet Prepare and cook a variety of predominantly</p>

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	<p>Use appropriate materials. Work accurately to make cuts and holes. Join materials. Begin to make strong structures.</p>	<p>Select appropriate tools / techniques. Alter product after checking, to make it better. Begin to try new/different ideas. Use simple lever and linkages to create movement.</p>	<p>Join different textiles in different ways. Choose textiles considering appearance and functionality. Begin to understand that a simple fabric shape can be used to make a 3D textile project.</p>	<p>Carefully select ingredients. Use equipment safely. Make product look attractive. Think about how to grow plants to use in cooking. Begin to understand food comes from UK and wider world. Describe how healthy diet= variety/balance of food/drinks. Explain how food and drink are needed for active/healthy bodies. Prepare and cook some dishes safely and hygienically. Grow in confidence using some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p>	<p>Use simple circuit in product. Learn about how to program a computer to control product.</p>
Skills					

	<p>Design</p> <p>To know that shapes and structures with wide, flat bases or legs are the most stable. To understand that the shape of a structure affects its strength. To know that materials can be manipulated to improve strength and stiffness. To know that a structure is something which has been formed or made from parts. To know that a 'stable' structure is one which is firmly fixed and unlikely to change or move. To know that a 'strong' structure is one which does not break easily. To know that a 'stiff' structure or material is one which does not bend easily.</p>	<p>Make</p> <p>Select suitable tools/equipment, Explain choices; begin to use them accurately. Select appropriate materials, fit for purpose. Work through plan in order. Consider how good product will be Begin to measure, mark out, cut and shape materials/components with some accuracy. Begin to assemble, join and combine materials and components with some accuracy. Begin to apply a range of finishing techniques with some accuracy.</p>	<p>Evaluate</p> <p>Look at design criteria while designing and making. Use design criteria to evaluate finished product. Say what I would change to make design better. Begin to evaluate existing products, considering how well they have been made, materials, whether they work, how they have been made, fit for purpose. Begin to understand by whom, when and where products were designed. Learn about some inventors/designers/ engineers/chefs/ manufacturers of ground-breaking products.</p>
	<p>Locality Trip to Morrisons to buy the ingredients for their food topic.</p>		
<p>Year 4</p>	<p>Alarms <u>National Curriculum</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</p>	<p>Containers <u>National Curriculum</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-</p>	<p>Seasonal Food <u>National Curriculum</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-</p>

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	<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> <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> <p>Understand how key events and individuals in design and technology have helped shape the world.</p> <p>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</p> <p>Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</p> <p>Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</p> <p>Apply their understanding of computing to program, monitor and control their products.</p> <p>Understand and apply the principles of a healthy and varied diet.</p> <p>Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</p> <p>Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.</p>	<p>aided design.</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> <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> <p>Understand how key events and individuals in design and technology have helped shape the world.</p> <p>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</p> <p>Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</p> <p>Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</p> <p>Apply their understanding of computing to program, monitor and control their products.</p> <p>Understand and apply the principles of a healthy and varied diet.</p> <p>Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</p> <p>Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed</p>	<p>aided design.</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> <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> <p>Understand how key events and individuals in design and technology have helped shape the world.</p> <p>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</p> <p>Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</p> <p>Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers, and motors]</p> <p>Apply their understanding of computing to program, monitor and control their products.</p> <p>Understand and apply the principles of a healthy and varied diet.</p> <p>Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</p> <p>Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed</p>
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<p>Measure carefully to avoid mistakes. Attempt to make product strong. Continue working on product even if original didn't work. Make a strong, stiff structure.</p>	<p>Select most appropriate tools / techniques. Explain alterations to product after checking it. Grow in confidence about trying new / different ideas. Use levers and linkages to create movement. Use pneumatics to create movement.</p>	<p>Think about user when choosing textiles. Think about how to make product strong. Begin to devise a template. Explain how to join things in a different way. Understand that a simple fabric shape can be used to make a 3D textile project.</p>	<p>Explain how to be safe/hygienic. Think about presenting product in interesting/ attractive ways. Understand ingredients can be fresh, pre-cooked or processed. Begin to understand about food being grown, reared or caught in the UK or wider world. Describe eat well plate and how a healthy diet=variety / balance of food and drinks. Explain importance of food and drink for active, healthy bodies. Prepare and cook some dishes safely and hygienically. Use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p>	<p>Use number of components in circuit. Program a computer to control product.</p>
<u>Skills</u>				
<u>Design</u>	<u>Make</u>	<u>Evaluate</u>		
<p>Use research for design ideas. Show design meets a range of requirements and is fit for purpose. Begin to create own design criteria. Have at least one idea about how to create product and suggest improvements for design. Produce a plan and explain it to others.</p>	<p>Select suitable tools and equipment, explain choices in relation to required techniques and use accurately. Select appropriate materials, fit for purpose; explain choices. Work through plan in order. Realise if product is going to be good quality. Measure, mark out, cut and shape</p>	<p>Refer to design criteria while designing and making. Use criteria to evaluate product. Begin to explain how I could improve original design. Evaluate existing products, considering how well they've been made, materials, whether they work, how they have been made, fit for purpose.</p>		



	<p>Say how realistic plan is. Include an annotated sketch. Make and explain design decisions considering availability of resources. Explain how product will work. Make a prototype. Begin to use computers to show design.</p>	<p>materials/components with some accuracy. Assemble, join, and combine materials and components with some accuracy. Apply a range of finishing techniques with some accuracy.</p>	<p>Discuss by whom, when and where products were designed. Research whether products can be recycled or reused. Know about some inventors/designers/engineers/chefs/manufacturers of ground-breaking products.</p>	
<p>Locality Trip to Morrisons to buy the ingredients for their food topic.</p>				
<p>Year 5</p>	<p>Fashion and Textiles <u>National Curriculum</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. 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. 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</p>	<p>Toys <u>National Curriculum</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. 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 Investigate and analyse a range of existing products. Evaluate their ideas and products against their own design criteria and consider the</p>	<p>Bread <u>National Curriculum</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. 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 Investigate and analyse a range of existing products. Evaluate their ideas and products against their own design criteria and consider the</p>	

	<p>design and technology have helped shape the world. Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] Apply their understanding of computing to program, monitor and control their products. Understand and apply the principles of a healthy and varied diet. Prepare and cook a 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.</p>	<p>views of others to improve their work. Understand how key events and individuals in design and technology have helped shape the world. Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] Apply their understanding of computing to program, monitor and control their products. Understand and apply the principles of a healthy and varied diet. Prepare and cook a 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.</p>	<p>views of others to improve their work. Understand how key events and individuals in design and technology have helped shape the world. Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] Apply their understanding of computing to program, monitor and control their products. Understand and apply the principles of a healthy and varied diet. Prepare and cook a 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.</p>	
	<u>Knowledge</u>			
<u>Technical Knowledge – materials and structures</u>	<u>Technical Knowledge – mechanisms</u>	<u>Technical Knowledge – textiles</u>	<u>Technical Knowledge – food and nutrition</u>	<u>Technical Knowledge – electrical systems</u>
<p>Select materials carefully, considering intended use of product and appearance. Explain how product meets design criteria.</p>	<p>Refine product after testing. Grow in confidence about trying new / different ideas.</p>	<p>Think about user and aesthetics when choosing textiles. Use own template. Think about how to make product strong and look better. Think of a range of ways to join</p>	<p>Explain how to be safe / hygienic and follow own guidelines. Present product well - interesting, attractive, fit for purpose.</p>	<p>Incorporate switch into product. Confidently use number of components in circuit.</p>

	<p>Measure accurately enough to ensure precision. Ensure product is strong and fit for purpose. Begin to reinforce and strengthen a 3D frame.</p>	<p>Begin to use cams, pulleys or gears to create movement.</p>	<p>things. Begin to understand that a single 3D textiles project can be made from a combination of fabric shapes.</p>	<p>Begin to understand seasonality of foods. Understand food can be grown, reared or caught in the UK and the wider world. Describe how recipes can be adapted to change appearance, taste, texture, aroma. Explain how there are different substances in food / drink needed for health. Prepare and cook some savoury dishes safely and hygienically including, where appropriate, use of heat source. Use range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p>	<p>Begin to be able to program a computer to monitor changes in environment and control product.</p>
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Skills

Design	Make	Evaluate
<p>Use internet and questionnaires for research and design ideas. Take a user's view into account when designing. Begin to consider needs/wants of individuals/groups when designing and ensure product is fit for purpose. Create own design criteria.</p>	<p>Use selected tools/equipment with good level of precision. Produce suitable lists of tools, equipment/materials needed. Select appropriate materials, fit for purpose; explain choices, considering functionality. Create and follow detailed step-by-step</p>	<p>Evaluate quality of design while designing and making. Evaluate ideas and finished product against specification, considering purpose and appearance. Test and evaluate final product. Evaluate and discuss existing products, considering: how well they've been made,</p>

	<p>Have a range of ideas. Produce a logical, realistic plan and explain it to others. Use cross-sectional planning and annotated sketches. Make design decisions considering time and resources. Clearly explain how parts of product will work. Model and refine design ideas by making prototypes and using pattern pieces. Use computer-aided designs.</p>	<p>plan. Explain how product will appeal to an audience. Mainly accurately measure, mark out, cut and shape materials/components. Mainly accurately assemble, join and combine materials/components. Mainly accurately apply a range of finishing techniques. Use techniques that involve a small number of steps. Begin to be resourceful with practical problems.</p>	<p>materials, whether they work, how they have been made, fit for purpose. Begin to evaluate how much products cost to make and how innovative they are. Research how sustainable materials are Talk about some key inventors/designers/engineers/ chefs/manufacturers of ground-breaking products.</p>	
	<p>Locality Trip to Morrisons to buy the ingredients for their food topic.</p> <p>Diversity Male/female designers and their choice of design style. Are males or females designers more popular? Research toys from various cultures, how are they similar/different?</p>			
<p>Year 6</p>	<p>Bridges National Curriculum 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 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</p>	<p>Fairgrounds National Curriculum 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 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</p>	<p>Burgers National Curriculum 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 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</p>	

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	<p>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 Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] Apply their understanding of computing to program, monitor and control their products. Understand and apply the principles of a healthy and varied diet Prepare and cook a 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</p>	<p>materials, textiles and ingredients, according to their functional properties and aesthetic qualities 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 Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] Apply their understanding of computing to program, monitor and control their products. Understand and apply the principles of a healthy and varied diet Prepare and cook a 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</p>	<p>materials, textiles and ingredients, according to their functional properties and aesthetic qualities 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 Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] Apply their understanding of computing to program, monitor and control their products. Understand and apply the principles of a healthy and varied diet Prepare and cook a 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</p>
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<u>Knowledge</u>				
<u>Technical Knowledge – materials and structures</u>	<u>Technical Knowledge – mechanisms</u>	<u>Technical Knowledge – textiles</u>	<u>Technical Knowledge – food and nutrition</u>	<u>Technical Knowledge – electrical systems</u>
Select materials carefully, considering intended use of the product, the aesthetics and functionality. Explain how product	Refine product after testing, considering aesthetics, functionality and purpose. Incorporate	Think about user's wants/needs and aesthetics when choosing textiles. Make product attractive and strong. Make a prototype. Use a range of joining techniques. Think about how product might be	Understand a recipe can be adapted by adding / substituting ingredients. Explain seasonality of foods. Learn about food processing methods.	Use different types of circuit in product. Think of ways in which adding a circuit would improve product. Program a computer to

	<p>meets design criteria. Reinforce and strengthen a 3D frame.</p>	<p>hydraulics and pneumatics. Be confident to try new / different ideas. Use cams, pulleys and gears to create movement.</p>	<p>sold. Think carefully about what would improve product. Understand that a single 3D textiles project can be made from a combination of fabric shapes.</p>	<p>Name some types of food that are grown, reared or caught in the UK or wider world. Adapt recipes to change appearance, taste, texture or aroma. Describe some of the different substances in food and drink, and how they can affect health. Prepare and cook a variety of savoury dishes safely and hygienically including, where appropriate, the use of heat source. Use a range of techniques confidently such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</p>	<p>monitor changes in environment and control product.</p>
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Skills

Design	Make	Evaluate
<p>Draw on market research to inform design. Use research of user's individual needs, wants, requirements for design. Identify features of design that will appeal to the intended user. Create own design criteria and specification. Come up with innovative design ideas. Follow and refine a logical plan. Use annotated sketches, cross-sectional planning and exploded diagrams .</p>	<p>Use selected tools and equipment precisely. Produce suitable lists of tools, equipment, materials needed, considering constraints. Select appropriate materials, fit for purpose; explain choices, considering functionality and aesthetics. Create, follow, and adapt detailed step-by-step plans. Explain how product will appeal to audience; make changes to improve quality.</p>	<p>Evaluate quality of design while designing and making; is it fit for purpose? Keep checking design is best it can be. Evaluate ideas and finished product against specification, stating if it's fit for purpose. Test and evaluate final product; explain what would improve it and the effect different resources may have had. Do thorough evaluations of existing products considering how well they've been made, materials, whether they work, how they've been made, fit for purpose.</p>

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	<p>Make design decisions, considering, resources and cost. Clearly explain how parts of design will work, and how they are fit for purpose. Independently model and refine design ideas by making prototypes and using pattern pieces. Use computer-aided designs.</p>	<p>Accurately measure, mark out, cut and shape materials/components. Accurately assemble, join and combine materials/components. Accurately apply a range of finishing techniques. Use techniques that involve a number of steps. Be resourceful with practical problems.</p>	<p>Evaluate how much products cost to make and how innovative they are. Research and discuss how sustainable materials are. Consider the impact of products beyond their intended purpose. Discuss some key inventors/designers/engineers/ chefs/manufacturers of ground-breaking products.</p>	
<p>Locality Trip to Morrisons to buy the ingredients for their food topic. Diversity Male/female chefs and their successes</p>				