

Badsley Primary School

Subject: DT

Coverage

	FS2	Y1	Y2	Y3	Y4	Y5	Y6
Autumn 1							Food/ Nutrition
Autumn 2		Textiles - Puppets	Mechanisms	Textiles	Electrical Systems	Mechanisms	
Spring 1 & 2		Mechanisms (Spr 2)	Structures	Mechanical systems	Structures	Food/ Nutrition	Structures
Summer 1						Textiles	Electrical Systems
Summer 2		Food/ Nutrition	Food/ Nutrition	Food/ nutrition	Food/ Nutrition		

Vocabulary progression

	FS2	Y1	Y2	Y3	Y4	Y5	Y6
Need to know	Push Pull Up Down Forwards Backwards Cut Model fruit and vegetable names,	Design Make Evaluate purpose Join Template Tools fabric Product Fix Stitch Sew Needle material  Knife Fork Spoon Chopping board Ladle Pan Mixing bowl Rolling pin Cookie cutter slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients, planning,	slider, lever, pivot, slot, bridge/guide user, purpose, Ideas design criteria, Function fix structure, Tower Framework weak, strong,	felt, fasten, compartment, button, structure, finishing technique, strength, weakness, stiffening, seam model, prototype, annotated sketch, syringe, plunger, functional, innovative, investigate, drawing, pattern pieces components, attach, process, appealing, design brief, research cook, utensil, slow cooker, simmer, boil, hob	series circuit, fault, connection, toggle switch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip control, program, system, seasonal, shell structure, three-dimensional (3-D) shape, marking out, scoring, shaping, tabs, adhesives, assemble, accuracy,  Need to add in utensils and cooking techniques when the nutrition unit has been decided	yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, Combine knead, stir, pour, rubbing in, whisk, beat, roll out, Sprinkle	frame structure, reinforce, triangulation, stability, temporary, permanent design brief, light dependent resistor (LDR), tilt switch, light emitting diode (LED), parallel circuit function, names of switches and components, input device, output device, monitor, flowchart function,  Need to add in utensils and cooking techniques when the nutrition unit has been decided





Progression of knowledge and skills

Concept	FS2	Y1	Y2	Y3	Y4	Y5	Y6
Design	<p>Communicate ideas through talk and deciding on one idea.</p> <p>Deciding what materials need.</p>	<ul style="list-style-type: none"> <li>• Generate initial ideas and simple design criteria through talking and using own experiences.</li> <li>• Design appealing products for a particular user based on simple design criteria.</li> <li>• Generate initial ideas and design criteria through investigating a variety of fruit and vegetables.</li> <li>• Communicate ideas through talk and drawings.</li> <li>• Design a functional and appealing product for a chosen user and purpose based on simple design criteria.</li> <li>• Generate, develop, model and communicate</li> </ul>	<ul style="list-style-type: none"> <li>• Generate ideas based on simple design criteria and their own experiences, explaining what they could make.</li> <li>• Develop, model and communicate their ideas through talking, mock-ups and drawings.</li> <li>• Design appealing products for a particular user based on simple design criteria.</li> <li>• Generate initial ideas and design criteria through investigating a variety of fruit and vegetables.</li> <li>• Communicate ideas through talk and drawings.</li> </ul>	<ul style="list-style-type: none"> <li>• Generate realistic ideas through discussion and design criteria for an appealing, functional product fit for purpose and specific user/s.</li> <li>• Produce annotated sketches, prototypes, final product sketches and pattern pieces.</li> <li>• Generate and clarify ideas through discussion with peers and adults to develop design criteria including appearance, taste, texture and aroma for an appealing product for a particular user and purpose.</li> <li>• Use annotated sketches and</li> </ul>	<ul style="list-style-type: none"> <li>• Gather information about needs and wants, and develop design criteria to inform the design of products that are fit for purpose, aimed at particular individuals or groups.</li> <li>• Generate, develop, model and communicate realistic ideas through discussion and, as appropriate, annotated sketches, cross-sectional and exploded diagrams.</li> <li>• Generate realistic ideas and design criteria collaboratively through discussion, focusing on the needs of the user</li> </ul>	<ul style="list-style-type: none"> <li>• Generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification.</li> <li>• Explore a range of initial ideas, and make design decisions to develop a final product linked to user and purpose.</li> <li>• Use words, annotated sketches and information and communication technology as appropriate to develop and communicate ideas.</li> <li>• Generate innovative ideas by carrying out</li> </ul>	<ul style="list-style-type: none"> <li>• Generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification.</li> <li>• Explore a range of initial ideas, and make design decisions to develop a final product linked to user and purpose.</li> <li>• Use words, annotated sketches and information and communication technology as appropriate to develop and communicate ideas.</li> <li>• Generate innovative ideas by carrying out</li> </ul>

		<p>their ideas as appropriate through talking, drawing, templates, mock-ups and information and communication technology.</p>		<p>appropriate information and communication technology, such as web-based recipes, to develop and communicate ideas.</p> <ul style="list-style-type: none"> <li>• Generate realistic ideas and their own design criteria through discussion, focusing on the needs of the user.</li> <li>• Use annotated sketches and prototypes to develop, model and communicate ideas.</li> </ul>	<p>and purpose of the product.</p> <ul style="list-style-type: none"> <li>• Develop ideas through the analysis of existing products and use annotated sketches and prototypes to model and communicate ideas.</li> <li>• Generate and clarify ideas through discussion with peers and adults to develop design criteria including appearance, taste, texture and aroma for an appealing product for a particular user and purpose.</li> <li>• Use annotated sketches and appropriate information and communication technology, such as web-based recipes, to develop</li> </ul>	<p>research using surveys, interviews, questionnaires and web-based resources.</p> <ul style="list-style-type: none"> <li>• Develop a simple design specification to guide their thinking.</li> <li>• Develop and communicate ideas through discussion, annotated drawings, exploded drawings and drawings from different views.</li> <li>• Develop, model and communicate ideas through talking, drawing, templates, mock-ups and prototypes and, where appropriate, computer-aided design.</li> </ul>	<p>research including surveys, interviews and questionnaires.</p> <ul style="list-style-type: none"> <li>• Develop, model and communicate ideas through talking, drawing, templates, mock-ups and prototypes and, where appropriate, computer-aided design.</li> <li>• Design purposeful, functional, appealing products for the intended user that are fit for purpose based on a simple design specification.</li> <li>• Carry out research into user needs and existing products, using surveys, interviews, questionnaires</li> </ul>
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					and communicate ideas.	<ul style="list-style-type: none"><li>• Design purposeful, functional, appealing products for the intended user that are fit for purpose based on a simple design specification.</li></ul>	and web-based resources. <ul style="list-style-type: none"><li>• Develop a simple design specification to guide the development of their ideas and products, taking account of constraints including time, resources and cost.</li><li>• Generate, develop and model innovative ideas, through discussion, prototypes and annotated</li><li>• Use research to develop a design specification for a functional product that responds automatically to changes in the environment. Take account of constraints including time,</li></ul>
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							resources and cost.  <ul style="list-style-type: none"> <li>• Generate and develop innovative ideas and share and clarify these through discussion.</li> <li>• Communicate ideas through annotated sketches, pictorial representations of electrical circuits or circuit diagrams.</li> </ul>
Make	Select from a selection in front of them which materials and equipment needed for the task. Watch and copy someone modelling the process of making.	<ul style="list-style-type: none"> <li>• Select from and use a range of tools and equipment to perform practical tasks such as cutting and joining to allow movement and finishing.</li> <li>• Use simple utensils and equipment to e.g. peel, cut, slice, squeeze, grate and chop safely.</li> </ul>	<ul style="list-style-type: none"> <li>• Plan by suggesting what to do next.</li> <li>• Select and use tools, skills and techniques, explaining their choices.</li> <li>• Use simple finishing techniques suitable for the structure they are creating.</li> <li>• Use simple utensils and</li> </ul>	<ul style="list-style-type: none"> <li>• Plan the main stages of making.</li> <li>• Select and use a range of appropriate tools with some accuracy e.g. cutting, joining and finishing.</li> <li>• Select fabrics and fastenings according to their functional characteristics e.g. strength, and aesthetic qualities e.g. pattern.</li> </ul>	<ul style="list-style-type: none"> <li>• Order the main stages of making.</li> <li>• Select from and use tools and equipment to cut, shape, join and finish with some accuracy.</li> <li>• Select from and use materials and components, including construction materials and electrical components according to their</li> </ul>	<ul style="list-style-type: none"> <li>• Write a step-by-step recipe, including a list of ingredients, equipment and utensils</li> <li>• Select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients.</li> <li>• Make, decorate and present the</li> </ul>	<ul style="list-style-type: none"> <li>• Write a step-by-step recipe, including a list of ingredients, equipment and utensils</li> <li>• Select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients.</li> <li>• Make, decorate and present the</li> </ul>



		<ul style="list-style-type: none"> <li>• Select from a range of fruit and vegetables according to their characteristics e.g. colour, texture and taste to create a chosen product.</li> <li>• Select from and use a range of tools and equipment to perform practical tasks such as marking out, cutting, joining and finishing.</li> <li>• Select from and use textiles according to their characteristics.</li> </ul>	<p>equipment to e.g. peel, cut, slice, squeeze, grate and chop safely.</p> <ul style="list-style-type: none"> <li>• Select from a range of fruit and vegetables according to their characteristics e.g. colour, texture and taste to create a chosen product.</li> </ul>	<ul style="list-style-type: none"> <li>• Plan the main stages of a recipe, listing ingredients, utensils and equipment.</li> <li>• Select and use appropriate utensils and equipment to prepare and combine ingredients.</li> <li>• Select from a range of ingredients to make appropriate food products, thinking about sensory characteristics.</li> <li>• Order the main stages of making.</li> <li>• Select from and use appropriate tools with some accuracy to cut, shape and join paper and card.</li> <li>• Select from and use finishing</li> </ul>	<p>functional properties and aesthetic qualities.</p> <ul style="list-style-type: none"> <li>• Select and use appropriate tools to measure, mark out, cut, score, shape and assemble with some accuracy.</li> <li>• Explain their choice of materials according to functional properties and aesthetic qualities.</li> <li>• Use finishing techniques suitable for the product they are creating.</li> <li>• Plan the main stages of a recipe, listing ingredients, utensils and equipment.</li> <li>• Select and use appropriate utensils and equipment to prepare and</li> </ul>	<p>food product appropriately for the intended user and purpose.</p> <ul style="list-style-type: none"> <li>• Demonstrate how to measure out, cut, shape and combine e.g. knead, beat, rub and mix ingredients.</li> <li>• Produce detailed lists of tools, equipment and materials.</li> </ul> <p>Formulate step-by-step plans and, if appropriate, allocate tasks within a team.</p> <ul style="list-style-type: none"> <li>• Select from and use a range of tools and equipment to make products that that are accurately assembled and well finished.</li> </ul> <p>Work within the constraints of</p>	<p>food product appropriately for the intended user and purpose.</p> <ul style="list-style-type: none"> <li>• Demonstrate how to measure out, cut, shape and combine e.g. knead, beat, rub and mix ingredients.</li> <li>• Produce detailed lists of equipment and fabrics relevant to their tasks.</li> <li>• Formulate step-by-step plans and, if appropriate, allocate tasks within a team.</li> <li>• Select from and use a range of tools and equipment to make products that are accurately assembled and well finished.</li> </ul> <p>Work within the constraints of</p>
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				<p>techniques suitable for the product they are creating.</p>	<p>combine ingredients.</p> <ul style="list-style-type: none"> <li>• Select from a range of ingredients to make appropriate food products, thinking about sensory characteristics.</li> <li>• Learn to select and use a range of utensils and use a range of techniques as appropriate to prepare ingredients hygienically including the bridge and claw technique, grating, peeling, chopping, slicing, mixing, spreading, kneading and baking.</li> </ul>	<p>time, resources and cost.</p> <ul style="list-style-type: none"> <li>• Produce detailed lists of equipment and fabrics relevant to their tasks.</li> <li>• Formulate step-by-step plans and, if appropriate, allocate tasks within a team.</li> <li>• Select from and use a range of tools and equipment to make products that are accurately assembled and well finished. Work within the constraints of time, resources and cost.</li> </ul>	<p>time, resources and cost.</p> <p>Evaluating</p> <ul style="list-style-type: none"> <li>• Investigate and analyse textile products linked to their final product.</li> <li>• Compare the final product to the original design specification.</li> <li>• Test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose.</li> <li>• Consider the views of others to improve their work.</li> <li>• Formulate a step-by-step plan to guide making, listing tools, equipment,</li> </ul>
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							<p>materials and components.</p> <ul style="list-style-type: none"> <li>• Competently select and accurately assemble materials, and securely connect electrical components to produce a reliable, functional product.</li> <li>• Create and modify a computer control program to enable an electrical product to work automatically in response to changes in the environment.</li> </ul>
Evaluate	Let's think about it – what went well? What might you do different next time?	<ul style="list-style-type: none"> <li>• Explore and evaluate a range of products with wheels and axles.</li> <li>• Evaluate their ideas throughout and their products against original criteria.</li> </ul>	<ul style="list-style-type: none"> <li>• Explore a range of existing books and everyday products that use simple sliders and levers.</li> <li>• Evaluate their product by discussing how well it works in</li> </ul>	<ul style="list-style-type: none"> <li>• Investigate a range of 3-D textile products relevant to the project.</li> <li>• Test their product against the original design criteria and with the intended user.</li> </ul>	<ul style="list-style-type: none"> <li>• Investigate and analyse a range of existing battery-powered products.</li> <li>• Test and evaluate their ideas and products against their own design criteria and identify the</li> </ul>	<ul style="list-style-type: none"> <li>• Carry out sensory evaluations of a range of relevant products and ingredients. Record the evaluations using e.g. tables/graphs/cha</li> </ul>	<ul style="list-style-type: none"> <li>• Carry out sensory evaluations of a range of relevant products and ingredients. Record the evaluations using e.g. tables/graphs/cha</li> </ul>

		<ul style="list-style-type: none"> <li>• Taste and evaluate a range of fruit and vegetables to determine the intended user's preferences.</li> <li>• Evaluate ideas and finished products against design criteria, including intended user and purpose.</li> <li>• Explore and evaluate a range of existing textile products relevant to the project being undertaken.</li> <li>• Evaluate their ideas throughout and their final products against original design criteria.</li> </ul>	<p>relation to the purpose and the user and whether it meets design criteria.</p> <ul style="list-style-type: none"> <li>• Explore a range of existing freestanding structures in the school and local environment e.g. everyday products and buildings.</li> <li>• Taste and evaluate a range of fruit and vegetables to determine the intended user's preferences.</li> <li>• Evaluate ideas and finished products against design criteria, including intended user and purpose.</li> </ul>	<ul style="list-style-type: none"> <li>• Take into account others' views.</li> <li>• Understand how a key event/individual has influenced the development of the chosen product and/or fabric.</li> <li>• Carry out sensory evaluations of a variety of ingredients and products. Record the evaluations using e.g. tables and simple graphs.</li> <li>• Evaluate the ongoing work and the final product with reference to the design criteria and the views of others.</li> <li>• Investigate and analyse books and, where available, other products</li> </ul>	<p>strengths and areas for improvement in their work.</p> <ul style="list-style-type: none"> <li>• Investigate and evaluate a range of existing shell structures including the materials, components and techniques that have been used.</li> <li>• Carry out sensory evaluations of a variety of ingredients and products. Record the evaluations using e.g. tables and simple graphs.</li> <li>• Evaluate the ongoing work and the final product with reference to the design criteria and the views of others.</li> </ul>	<p>rts such as star diagrams.</p> <ul style="list-style-type: none"> <li>• Evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements.</li> <li>• Understand how key chefs have influenced eating habits to promote varied and healthy diets.</li> <li>• Compare the final product to the original design specification.</li> <li>• Test products with intended user and critically evaluate the quality of the design, manufacture, functionality and</li> </ul>	<p>rts such as star diagrams.</p> <ul style="list-style-type: none"> <li>• Evaluate the final product with reference back to the design brief and design specification, taking into account the views of others when identifying improvements.</li> <li>• Understand how key chefs have influenced eating habits to promote varied and healthy diets.</li> <li>• Formulate a clear plan, including a step-by-step list of what needs to be done and lists of resources to be used.</li> <li>• Competently select from and use appropriate tools to accurately measure, mark</li> </ul>
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				<p>with lever and linkage mechanisms.</p> <ul style="list-style-type: none"> <li>• Evaluate their own products and ideas against criteria and user needs, as they design and make.</li> </ul>		<p>fitness for purpose.</p> <ul style="list-style-type: none"> <li>• Consider the views of others to improve their work.</li> <li>• Investigate famous manufacturing and engineering companies relevant to the project.</li> <li>• Investigate and analyse textile products linked to their final product.</li> <li>• Compare the final product to the original design specification.</li> <li>• Test products with intended user and critically evaluate the quality of the design, manufacture, functionality and fitness for purpose.</li> </ul>	<p>out, cut, shape and join construction materials to make frameworks.</p> <ul style="list-style-type: none"> <li>• Use finishing and decorative techniques suitable for the product they are designing and making.</li> <li>• Investigate and evaluate a range of existing frame structures.</li> <li>• Critically evaluate their products against their design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests.</li> <li>• Research key events and individuals</li> </ul>
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						<ul style="list-style-type: none"> <li>• Consider the views of others to improve their work.</li> </ul>	<p>relevant to frame structures.</p> <ul style="list-style-type: none"> <li>• Continually evaluate and modify the working features of the product to match the initial design specification.</li> <li>• Test the system to demonstrate its effectiveness for the intended user and purpose.</li> <li>• Investigate famous inventors who developed ground-breaking electrical systems and components.</li> </ul>
Technical Knowledge	Name utensils and equipment	<ul style="list-style-type: none"> <li>• Explore and use wheels, axles and axle holders.</li> <li>• Distinguish between fixed and freely moving axles.</li> <li>• Know and use technical vocabulary</li> </ul>	<ul style="list-style-type: none"> <li>• Explore and use sliders and levers.</li> <li>• Know and use technical vocabulary relevant to the project.</li> <li>• Know how to make freestanding structures</li> </ul>	<ul style="list-style-type: none"> <li>• Know how to strengthen, stiffen and reinforce existing fabrics.</li> <li>• Understand how to securely join two pieces of fabric together.</li> <li>• Understand the need for patterns</li> </ul>	<ul style="list-style-type: none"> <li>• Understand and use electrical systems in their products, such as series circuits incorporating switches, bulbs and buzzers.</li> <li>• Apply their understanding of computing to</li> </ul>	<ul style="list-style-type: none"> <li>• Know how to use utensils and equipment including heat sources to prepare and cook food.</li> <li>• Understand about seasonality in relation to food products and the</li> </ul>	<ul style="list-style-type: none"> <li>• Know how to use utensils and equipment including heat sources to prepare and cook food.</li> <li>• Understand about seasonality in relation to food products and the</li> </ul>

		<p>relevant to the project.</p> <ul style="list-style-type: none"> <li>• Understand where a range of fruit and vegetables come from e.g. farmed or grown at home.</li> <li>• Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of The eatwell plate.</li> <li>• Know and use technical and sensory vocabulary relevant to the project.</li> <li>• Understand how simple 3-D textile products are made, using a template to create two identical shapes.</li> </ul>	<p>stronger, stiffer and more stable.</p> <ul style="list-style-type: none"> <li>• Know and use technical vocabulary relevant to the project.</li> <li>• Understand where a range of fruit and vegetables come from e.g. farmed or grown at home.</li> <li>• Understand and use basic principles of a healthy and varied diet to prepare dishes, including how fruit and vegetables are part of The eatwell plate.</li> <li>• Know and use technical and sensory vocabulary relevant to the project.</li> </ul>	<p>and seam allowances.</p> <ul style="list-style-type: none"> <li>• Know and use technical vocabulary relevant to the project.</li> <li>• Know how to use appropriate equipment and utensils to prepare and combine food.</li> <li>• Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught.</li> <li>• Know and use relevant technical and sensory vocabulary appropriately.</li> <li>• Understand and use lever and linkage mechanisms.</li> </ul>	<p>program and control their products.</p> <ul style="list-style-type: none"> <li>• Know and use technical vocabulary relevant to the project.</li> <li>• Develop and use knowledge of how to construct strong, stiff shell structures.</li> <li>• Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes.</li> <li>• Know how to use appropriate equipment and utensils to prepare and combine food.</li> <li>• Know about a range of fresh and processed ingredients appropriate for</li> </ul>	<p>source of different food products.</p> <ul style="list-style-type: none"> <li>• Know and use relevant technical and sensory vocabulary.</li> <li>• Understand that mechanical and electrical systems have an input, process and an output.</li> <li>• Understand how gears and pulleys can be used to speed up, slow down or change the direction of movement.</li> <li>• Know and use technical vocabulary relevant to the project.</li> <li>• A 3-D textile product can be made from a combination of accurately made pattern pieces,</li> </ul>	<p>source of different food products.</p> <ul style="list-style-type: none"> <li>• Know and use relevant technical and sensory vocabulary.</li> <li>• A 3-D textile product can be made from a combination of accurately made pattern pieces, fabric shapes and different fabrics.</li> <li>• Fabrics can be strengthened, stiffened and reinforced where appropriate.</li> <li>• Understand and use electrical systems in their products.</li> <li>• Apply their understanding of computing to program, monitor and control their products.</li> </ul>
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		<ul style="list-style-type: none"> <li>• Understand how to join fabrics using different techniques e.g. running stitch, glue, over stitch, stapling.</li> <li>• Explore different finishing techniques e.g. using painting, fabric crayons, stitching, sequins, buttons and ribbons.</li> <li>• Know and use technical vocabulary relevant to the project.</li> </ul>		<ul style="list-style-type: none"> <li>• Distinguish between fixed and loose pivots.</li> <li>• Know and use technical vocabulary relevant to the project.</li> </ul>	<p>their product, and whether they are grown, reared or caught.</p>	<p>fabric shapes and different fabrics.</p> <ul style="list-style-type: none"> <li>• Fabrics can be strengthened, stiffened and reinforced where appropriate.</li> </ul>	<ul style="list-style-type: none"> <li>• Know and use technical vocabulary relevant to the project.</li> </ul>
<p>Selecting tools, materials and components</p>	<p>Playground equipment choosing bricks to build including lego.</p> <p>Choosing utensils for the task in baking.</p>	<ul style="list-style-type: none"> <li>• Select from and use a range of materials and components such as paper, card, plastic and wood according to their characteristics.</li> </ul>	<p>Select and use tools, explaining their choices, to cut, shape and join paper and card.</p> <ul style="list-style-type: none"> <li>• Use simple finishing techniques suitable for the product they are creating.</li> </ul>	<p>Select and use a range of appropriate tools with some accuracy e.g. cutting, joining and finishing. Select fabrics and fastenings according to their functional characteristics e.g. strength, and</p>	<ul style="list-style-type: none"> <li>• Select from and use tools and equipment to cut, shape, join and finish with some accuracy.</li> <li>• Learn to select and use a range of utensils and use a range of techniques as appropriate to prepare</li> </ul>	<ul style="list-style-type: none"> <li>• Select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients.</li> <li>• Select from and use a range of tools and equipment to</li> </ul>	<ul style="list-style-type: none"> <li>• Select and use appropriate utensils and equipment accurately to measure and combine appropriate ingredients.</li> <li>• Select from and use a range of tools and equipment to</li> </ul>



			<p>*Select new and reclaimed materials and construction kits to build their structures.</p>	<p>aesthetic qualities e.g. pattern.</p> <ul style="list-style-type: none"> <li>• Select and use appropriate utensils and equipment to prepare and combine ingredients.</li> <li>• Select from a range of ingredients to make appropriate food products, thinking about sensory characteristics.</li> <li>• Select from and use appropriate tools with some accuracy to cut, shape and join paper and card.</li> <li>• Select from and use finishing techniques suitable for the product they are creating.</li> </ul>	<p>ingredients hygienically including the bridge and claw technique, grating, peeling, chopping, slicing, mixing, spreading, kneading and baking.</p>	<p>make products that that are accurately assembled and well finished. Work within the constraints of time, resources and cost.</p> <ul style="list-style-type: none"> <li>• Produce detailed lists of equipment and fabrics relevant to their tasks.</li> <li>• Formulate step-by-step plans and, if appropriate, allocate tasks within a team.</li> <li>• Select from and use a range of tools and equipment to make products that are accurately assembled and well finished. Work within the constraints of time, resources and cost.</li> </ul>	<p>make products that are accurately assembled and well finished. Work within the constraints of time, resources and cost.</p> <ul style="list-style-type: none"> <li>• Competently select and accurately assemble materials, and securely connect electrical components to produce a reliable, functional product.</li> <li>• Create and modify a computer control program to enable an electrical product to work automatically in response to changes in the environment.</li> </ul>
Health & Safety	How to use scissors (and other	Pupils should be taught to work	Pupils should be taught to work	Pupils should be taught to work	• Remind children about the dangers	Pupils should be taught to work	Pupils should be taught to work

	appropriate tools) safely	<p>safely, using tools, equipment, materials, components and techniques appropriate to the task.</p> <p>Pupils should be taught to work safely and hygienically, using tools, equipment, techniques and ingredients appropriate to the task. Prior to undertaking this project risk assessments should be carried out, including identifying whether there are children who are not permitted to taste or handle any food ingredients or products.</p>	<p>safely, using tools, equipment, materials, components and techniques appropriate to the task.</p> <p>Pupils should be taught to work safely and hygienically, using tools, equipment, techniques and ingredients appropriate to the task. Prior to undertaking this project risk assessments should be carried out, including identifying whether there are children who are not permitted to taste or handle any food ingredients or products.</p>	<p>safely, using tools, equipment, materials, components and techniques appropriate to the task.</p> <p>Pupils should be taught to work safely and hygienically, using tools, equipment, techniques and ingredients appropriate to the task. Prior to undertaking this project risk assessments should be carried out, including identifying whether there are children who are not permitted to taste or handle any food ingredients or products.</p>	<p>of mains electricity. Pupils should be taught to work safely, using tools, equipment, materials, components and techniques appropriate to the task.</p> <p>Pupils should be taught to work safely and hygienically, using tools, equipment, techniques and ingredients appropriate to the task. Prior to undertaking this project risk assessments should be carried out, including identifying whether there are children who are not permitted to taste or handle any food ingredients or products.</p>	<p>safely and hygienically, using tools, equipment, techniques and ingredients appropriate to the task. Prior to undertaking this project risk assessments should be carried out, including identifying whether there are children who are not permitted to taste or handle any food ingredients or products.</p> <p>Pupils should be taught to work safely, using tools, equipment, materials, components and techniques appropriate to the task.</p>	<p>safely and hygienically, using tools, equipment, techniques and ingredients appropriate to the task. Prior to undertaking this project risk assessments should be carried out, including identifying whether there are children who are not permitted to taste or handle any food ingredients or products.</p> <p>Pupils should be taught to work safely, using tools, equipment, materials, components and techniques appropriate to the task.</p>
Mechanisms (KS1)	Prior learning	• Develop and communicate	• Develop, model and communicate				

	<ul style="list-style-type: none"> <li>• Early experiences of working with paper and card to make simple flaps and hinges.</li> <li>• Experience of simple cutting, shaping and joining skills using scissors, glue, paper fasteners and masking tape.</li> <li>• Assembled vehicles with moving wheels using construction kits.</li> <li>• Explored moving vehicles through play.</li> <li>• Gained some experience of designing, making and evaluating products for a specified user and purpose.</li> <li>• Developed some cutting, joining</li> </ul>	<p>ideas through drawings and mock-ups.</p> <p>Prior learning</p> <ul style="list-style-type: none"> <li>• Assembled vehicles with moving wheels using construction kits.</li> <li>• Explored moving vehicles through play.</li> <li>• Gained some experience of designing, making and evaluating products for a specified user and purpose.</li> <li>• Developed some cutting, joining and finishing skills with card.</li> </ul>	<p>their ideas through drawings and mock-ups with card and paper.</p> <p>Understand that different mechanisms produce different types of movement</p> <ul style="list-style-type: none"> <li>• Early experiences of working with paper and card to make simple flaps and hinges.</li> <li>• Experience of simple cutting, shaping and joining skills using scissors, glue, paper fasteners and masking tape.</li> </ul>				
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	and finishing skills with card.						
Mechanical Systems (KS2)				<ul style="list-style-type: none"> <li>• Explored and used mechanisms such as flaps, sliders and levers</li> <li>• Gained experience of basic cutting, joining and finishing techniques with paper and card.</li> </ul>		<ul style="list-style-type: none"> <li>• Experience of axles, axle holders and wheels that are fixed or free moving.</li> <li>• Basic understanding of electrical circuits, simple switches and components.</li> <li>• Experience of cutting and joining techniques with a range of materials including card, plastic and wood.</li> <li>• An understanding of how to strengthen and stiffen structures.</li> </ul>	
Structures	<ul style="list-style-type: none"> <li>• Experience of using construction kits to build walls, towers and frameworks.</li> <li>• Experience of using of basic tools</li> </ul>		<ul style="list-style-type: none"> <li>• Demonstrate measuring, marking out, cutting, shaping, joining and finishing techniques with a range of tools and</li> </ul>		<p>Prior learning</p> <ul style="list-style-type: none"> <li>• Experience of using different joining, cutting and finishing techniques with paper and card.</li> </ul>		<p>Prior learning</p> <ul style="list-style-type: none"> <li>• Experience of using measuring, marking out, cutting, joining, shaping and finishing techniques with</li> </ul>

	<p>e.g. scissors or hole punches with construction materials e.g. plastic, card.</p> <ul style="list-style-type: none"> <li>• Experience of different methods of joining card and paper.</li> </ul>		<p>new and reclaimed materials that children are likely to use to make their structures. Discuss the suitability of materials for their products according to their characteristics.</p> <ul style="list-style-type: none"> <li>• Ask the children to build and explore a variety of freestanding structures using construction kits, such as wooden blocks, interconnecting plastic bricks and those that make frameworks e.g. How can you stop your structures from falling over? How they can be made stronger and stiffer in order to carry a load? Children could make models of the structures they have seen in</li> </ul>		<ul style="list-style-type: none"> <li>• A basic understanding of 2-D and 3-D shapes in mathematics and the physical properties and everyday uses of materials in science.</li> </ul>		<p>construction materials.</p> <ul style="list-style-type: none"> <li>• Basic understanding of what structures are and how they can be made stronger, stiffer and more stable.</li> </ul>
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			<p>school and the local area.</p> <ul style="list-style-type: none"> <li>• Ask children to fold paper or card in different ways to make freestanding structures, using masking tape where necessary to make joins. Encourage them to think about how folding materials can make them stronger, stiffer, stand up and be more stable e.g. Can they support an object on top of their structures without it falling over or breaking?</li> </ul>				
Nutrition	<ul style="list-style-type: none"> <li>• Experience of common fruit and vegetables, undertaking sensory activities i.e. appearance taste and smell.</li> <li>• Experience of cutting soft fruit and vegetables</li> </ul>	<p>Prior learning • Experience of common fruit and vegetables, undertaking sensory activities i.e. appearance taste and smell.</p> <ul style="list-style-type: none"> <li>• Experience of cutting soft fruit</li> </ul>	<p>Prior learning • Experience of common fruit and vegetables, undertaking sensory activities i.e. appearance taste and smell.</p> <ul style="list-style-type: none"> <li>• Experience of cutting soft fruit</li> </ul>	<p>Prior learning • Know some ways to prepare ingredients safely and hygienically.</p> <ul style="list-style-type: none"> <li>• Have some basic knowledge and understanding about healthy</li> </ul>	<p>Prior learning • Know some ways to prepare ingredients safely and hygienically.</p> <ul style="list-style-type: none"> <li>• Have some basic knowledge and understanding about healthy</li> </ul>	<ul style="list-style-type: none"> <li>• Have knowledge and understanding about food hygiene, nutrition, healthy eating and a varied diet.</li> <li>• Be able to use appropriate equipment and utensils, and apply</li> </ul>	<ul style="list-style-type: none"> <li>• Have knowledge and understanding about food hygiene, nutrition, healthy eating and a varied diet.</li> <li>• Be able to use appropriate equipment and utensils, and apply</li> </ul>

	<p>using appropriate utensils.</p> <p>Following a method. Mixing, pouring, stirring, counting out ingredients, measuring (with support)</p>	<p>and vegetables using appropriate utensils.</p>	<p>and vegetables using appropriate utensils.</p>	<p>eating and The eatwell plate.</p> <ul style="list-style-type: none"> <li>• Have used some equipment and utensils and prepared and combined ingredients to make a product.</li> </ul>	<p>eating and The eatwell plate.</p> <ul style="list-style-type: none"> <li>• Have used some equipment and utensils and prepared and combined ingredients to make a product.</li> </ul>	<p>a range of techniques for measuring out, preparing and combining ingredients.</p>	<p>a range of techniques for measuring out, preparing and combining ingredients.</p>
Textiles	<ul style="list-style-type: none"> <li>• Explored and used different fabrics.</li> <li>• Cut and joined fabrics with simple techniques.</li> <li>• Thought about the user and purpose of products.</li> </ul>	<p>Prior learning</p> <ul style="list-style-type: none"> <li>• Explored and used different fabrics.</li> <li>• Cut and joined fabrics with simple techniques.</li> <li>• Thought about the user and purpose of products.</li> </ul>		<p>Prior learning</p> <ul style="list-style-type: none"> <li>• Have joined fabric in simple ways by gluing and stitching.</li> <li>• Have used simple patterns and templates for marking out.</li> <li>• Have evaluated a range of textile products.</li> </ul>		<ul style="list-style-type: none"> <li>• Experience of basic stitching, joining textiles and finishing techniques.</li> <li>• Experience of making and using simple pattern pieces.</li> <li>• Develop skills of threading needles and joining textiles using a range of stitches. This activity must build upon children's earlier experiences of stitches e.g. improving appearance and consistency of stitches and introducing new stitches. If</li> </ul>	

						<p>available, demonstrate and allow children to use sewing machines to join fabric with close adult supervision.</p> <ul style="list-style-type: none"><li>• Develop skills of sewing textiles by joining right side together and making seams. Children should investigate how to sew and shape curved edges by snipping seams, how to tack or attach wadding or stiffening and learn how to start and finish off a row of stitches.</li><li>• Develop skills of 2-D paper pattern making using grid or tracing paper to create a 3-D dipryl mock-up of a chosen product. Remind/teach how to pin a pattern on to fabric ensuring</li></ul>	
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						<p>limited wastage, how to leave a seam allowance and different cutting techniques.</p> <ul style="list-style-type: none"> <li>• Develop skills of computer-aided design (CAD) by using on-line pattern making software to generate pattern pieces. Investigate using art packages on the computer to design prints that can be applied to textiles using iron transfer paper.</li> </ul>	
Electrical Systems					<p>Prior learning</p> <ul style="list-style-type: none"> <li>• Constructed a simple series electrical circuit in science, using bulbs, switches and buzzers.</li> <li>• Cut and joined a variety of construction materials, such as wood, card, plastic, reclaimed</li> </ul>		<p>Prior learning</p> <ul style="list-style-type: none"> <li>• Understanding of the essential characteristics of a series circuit and experience of creating a battery-powered, functional, electrical product.</li> <li>• Initial experience of using computer</li> </ul>

					materials and glue.		control software and an interface box or a standalone box, e.g. writing and modifying a program to make a light flash on and off.
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