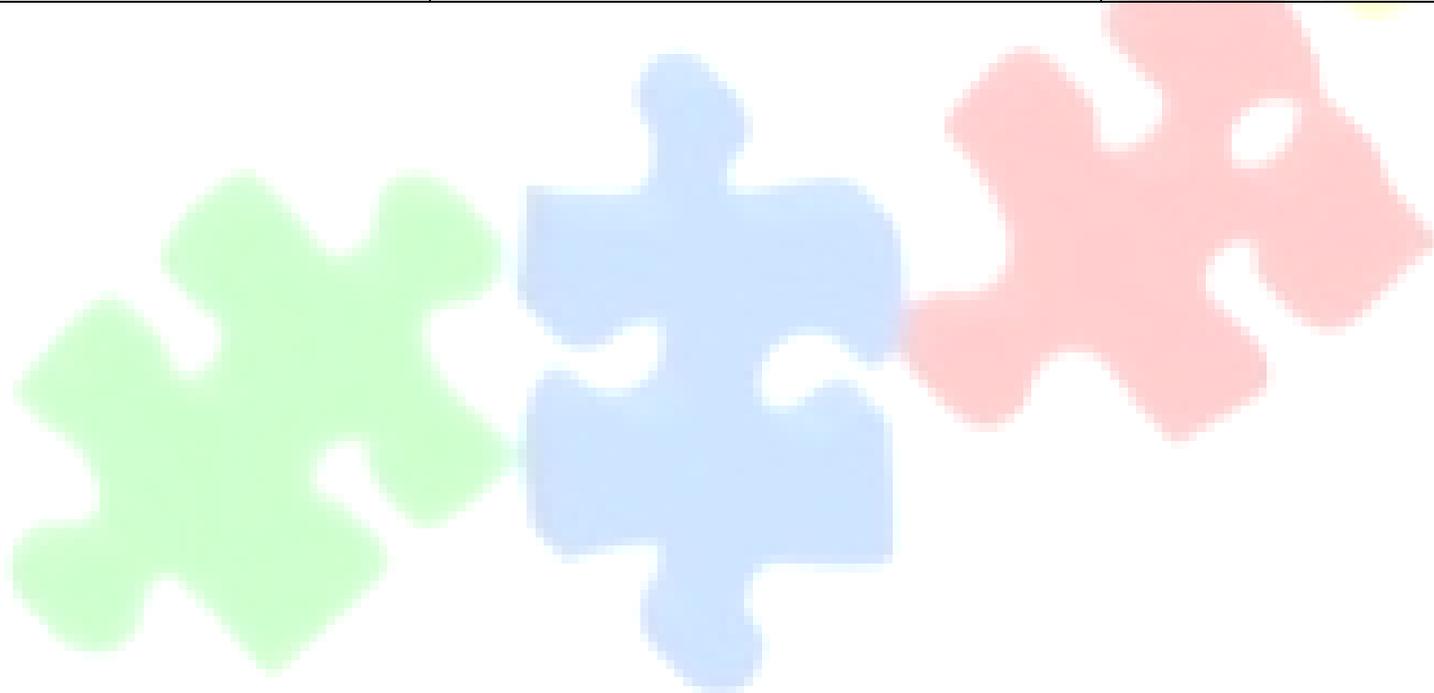


Project 2		National Curriculum Coverage	Progression of Skills
Year 4	<p>Cooking and Nutrition, healthy eating and balanced diet (<i>Design a healthy packed lunch</i>)</p> <p>Key Vocabulary:</p> <p>annotated sketch, appealing, design brief, design criteria, evaluating, function, innovative, planning, prototype, purpose, sensory evaluations, user,</p> <p>allergy, baking soda, beat, bran, carbohydrate, combine, crumble, dairy, dough, fat, flour, fold, gluten, healthy, herbs, ingredients, intolerance, knead, mix, nutrients, nutrition, pour, protein, roll out, rubbing in, savoury, seasonality, shape, source, spice, sprinkle, stir, sugar, unleavened, utensils, varied, vitamins, whisk, wholemeal, yeast,</p>	<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 • 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 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>Design</u> Designing a product within a given budget, drawing upon previous taste testing</p> <p><u>Make</u> Following a baking recipe Cooking safely, following basic hygiene rules Adapting a recipe</p> <p><u>Evaluation</u> Evaluating a recipe, considering: taste, smell, texture and appearance Describing the impact of the budget on the selection of ingredients Evaluating and comparing a range of products Suggesting modifications</p> <p><u>Technical Knowledge</u> Understanding the impact of the cost and importance of budgeting while planning ingredients Understanding the environmental impact on future product and cost of production Understanding what constitutes a balanced diet</p>

<p>Year 5</p>	<p>Textiles <i>(Jewellery, accessories and clothes from Tudor times)</i></p> <hr/> <p>Key Vocabulary:</p> <p>annotate, authentic, design brief, design criteria, design decisions, design specification, evaluate, functionality, innovative, mock-up, prototype, purpose, research, user</p> <p>button, compartment, fabric, fastening, finishing technique, names of fabrics, seam allowance, seam, stiffening, stitch, strength, structure, templates, weakness, zip</p>	<ul style="list-style-type: none"> • Generate, develop, model and communicate their ideas through discussions, 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 • Apply their understanding of how to strengthen, stiffen, and reinforce more complex structures • Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work 	<p><u>Design</u> Designing an item of clothing/<u>purse</u> considering the main component shapes required and creating an appropriate template Considering the proportions of individual components</p> <p><u>Make</u> Creating a 3D product from a 2D design Measuring, marking and cutting fabric accurately and independently Using applique to attach pieces of fabric decoration</p> <p><u>Evaluation</u> Testing and evaluating an end product and giving point for further improvements</p> <p><u>Technical Knowledge</u> Sewing cross stitch Articulating the benefits and disadvantages of different fastening types Threading needles independently Understanding that fabrics can be layered for affect</p>
<p>Year 6</p>	<p>Textiles: Sewing <i>(make do and mend project - sew bunting)</i></p> <hr/> <p>Key Vocabulary:</p> <p>annotated sketch, design brief, design specification, prototype, function, functional, innovation, innovative, mock-up, prototype, purpose, research,</p>	<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 • Understand and apply the principles of a healthy and varied diet • Select from and use a wider range of tools and equipment to perform practical tasks [for 	<p><u>Design</u> Designing a piece of bunting in accordance to specification linked to set of design criteria to fit a specific theme Annotating designs</p> <p><u>Make</u> Using a template when pinning panels onto fabric Marking and cutting fabric accurately, in accordance with a design Sewing a strong running stitch, making small, neat stitches and following the edge</p>

	<p>user</p> <p>fastenings, hem, name of textiles and fastenings used, needles, pattern pieces, pinking shears, pins, reinforce, right side, seam allowance, seam, template, thread, wadding, wrong side</p>	<p>example, cutting, shaping, joining and finishing], accurately</p> <ul style="list-style-type: none"> • 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 • Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work 	<p>Creating strong and secure blanket stitches when joining fabric</p> <p>Tying strong knots</p> <p>Decorating -attaching objects using thread and adding a secure fastening</p> <p><u>Evaluation</u></p> <p>Evaluating work continually as it is created</p> <p><u>Technical Knowledge</u></p> <p>Learning to sew blanket stitch to join fabric</p> <p>Applying blanket stitch so the space between the stitches are even and regular, and appliqué to decorate</p> <p>Learning different decorative stitches</p> <p>Application and outcome of the individual technique</p> <p>Sewing accurately with even regularity of stitches</p>
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Project 3		National Curriculum Coverage	Progression of Skills
Year 3	<p>Pneumatics - Mechanisms <i>(creating models of animals showing moving joints)</i> Change: link to writing WOW week – fairy-tale characters</p> <p>Key Vocabulary:</p> <p>annotated sketch, appealing, design criteria, design, drawing, evaluate, function, functional, ideas, innovative, investigate, investigating, label, make, model, planning, product, prototype, purpose, user</p> <p>always, control, deflate, fastest, hinge, inflate, input, never, often, output, pneumatic system, pressure, pump, slowest, sometimes</p>	<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 • Understand and use mechanical systems in their products, for example, gears, pulleys, cams, levers and linkages • Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work • Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities • Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately 	<p><u>Design</u> Designing a toy which uses a pneumatic system Developing design criteria from a design brief Generating ideas using thumbnail sketches and exploded diagrams Learning that different types of drawings are used in design to explain ideas clearly</p> <p><u>Make</u> Creating a pneumatic system to create a desired motion Building secure housing for a pneumatic system Using syringes and balloons to create different types of pneumatic systems to make a functional and appealing pneumatic toy Selecting materials due to their functional and aesthetic characteristics Manipulating materials to create different effects by cutting, creasing, folding, weaving</p> <p><u>Evaluation</u> Using the views of others to improve designs Testing and modifying the outcome, suggesting improvements Understanding the purpose of exploded-diagrams through the eyes of a designer and their client</p> <p><u>Technical Knowledge</u> Understanding how pneumatic systems work Learning that mechanisms are a system of parts that work together to create motion Understanding that pneumatic systems can be used as part of a mechanism Learning that pneumatic systems force air over a distance to create movement</p>

<p>Year 4</p> <p>Link to “Digital World” – controlling windmills with Crumble Kits</p>	<p>Electrical systems including renewable energy – <i>(design and make a windmill or win turbine– mechanisms including wheels/ axels and strengthening techniques)</i></p>	<ul style="list-style-type: none"> • Electricity in science including renewable energy – design and make a windmill or win turbine– mechanisms including wheels/ axels and strengthening techniques. • Investigate and analyse a range of existing products • Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] 	<p><u>Design</u> Designing a windmill, giving consideration to the target audience and creating both design and success criteria focusing on features of individual design ideas</p>
<p>Writing design criteria for a programmed timer (Micro:bit)</p> <p>Problem solving by suggesting potential features on a Micro: bit and justifying my ideas</p>	<p>Key Vocabulary:</p> <p>annotated sketch, appealing, design brief, design criteria, evaluating, function, innovative, planning, prototype, purpose, sensory evaluations, user</p> <p>battery holder, battery, bulb holder, bulb, conductor, connection, control, crocodile clip, fault, input device, insulator, output device</p> <p>program, push-to-break switch, push-to-make switch, series circuit, system, toggle switch, wire</p>	<ul style="list-style-type: none"> • Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design • Understand how key events and individuals in design and technology have helped the world • 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 • Select from and use a wider range of tools and equipment to perform practical tasks • 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 • Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work • apply their understanding of computing to program, monitor and control their products. 	<p><u>Make</u> Making a windmill with a working electrical circuit and switch Using appropriate equipment to cut and attach materials Assembling according to the design and success criteria</p> <p><u>Evaluation</u> Evaluating electrical products Testing and evaluating the success of a final product and taking inspiration from the work of peers</p> <p><u>Technical Knowledge</u> Learning how electrical items work Identifying electrical products Learning what electrical conductors and insulators are Understanding that a battery contains stored electricity and can be used to power products</p>

<p>Year 5</p>	<p>Electrical Systems (Creating a torch to explore caves in Alchemy Island)</p>	<ul style="list-style-type: none"> • 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 and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] • 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><u>Design</u> Designing a product with opper track circuit and components Create a labelled circuit diagram showing positive and negative parts in relation to the LED and the battery Writing design criteria Compiling a mood board relevant to my chosen theme, purpose and recipient</p> <p><u>Make</u> Making a functional series circuit Creating a product referring to a design criteria Mapping out where different components of the circuit will go</p> <p><u>Evaluation</u> Evaluating a peer’s product against design criteria and suggesting modifications that could be made to improve the reliability or aesthetics of it or to incorporate another type of circuit component Analysing and evaluating a range of existing torches.</p> <p><u>Technical Knowledge</u> Identifying the features of a torch Understanding how a torch works Articulating the positives and negatives about different torches Learning the key components used to create a functioning circuit Learning that copper is a conductor and can be used as part of a circuit Understanding that breaks in a circuit will stop it from working Explaining how a series circuit will work Drawing a series circuit diagram and symbols</p>
	<p>Key Vocabulary:</p> <p>annotate, authentic, design brief, design criteria, design decisions, design specification, evaluate, functionality, innovative, mock-up, prototype, purpose, research, user</p> <p>battery holder, battery, bulb holder, bulb, conductor, connection, control, crocodile clip, fault, input device, insulator, output device, parallel circuit, program, push-to-break switch, push-to-make switch, series circuit, system, toggle switch, USB cable, wire</p>		

Project 4		National Curriculum Coverage	Progression of Skills
Year 3	<p data-bbox="315 177 607 245">Cooking and Nutrition (Cook Well, Eat Well)</p> <p data-bbox="315 292 517 320">Key Vocabulary:</p> <p data-bbox="315 363 674 608">annotated sketch, appealing design criteria, design, drawing, evaluate, function, functional, innovative, investigate, label, model, planning, prototype, purpose, user,</p> <p data-bbox="315 651 730 1038">appearance, caught, cook, edible, fresh, frozen, greasy, grown, harvested, healthy/varied diet, hot, hygienic, moist, name of products, names of equipment, preference, processed, reared, savoury, seasonal, smell, sour, spicy, sweet, taste, techniques and ingredients texture, tinned, utensils</p>	<ul data-bbox="837 177 1435 459" style="list-style-type: none"> • 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 data-bbox="1464 177 2101 312"><u>Design</u> Creating a healthy and nutritious recipe for a savoury tart using seasonal ingredients, considering the taste, texture, smell and appearance of the dish</p> <p data-bbox="1464 355 2051 528"><u>Make</u> Knowing how to prepare themselves and a work space to cook safely in, learning the basic rules to avoid food contamination Following the instructions within a recipe</p> <p data-bbox="1464 571 2096 815"><u>Evaluation</u> Establishing and using design criteria to help test and review dishes Describing the benefits of seasonal fruits and vegetables and the impact on the environment Suggesting points for improvement when making a seasonal tart</p> <p data-bbox="1464 858 2063 1246"><u>Technical Knowledge</u> Learning that climate affects food growth Working with cooking equipment safely and hygienically Learning that imported foods travel from far away and this can negatively impact the environment Learning that vegetables and fruit grow in certain seasons Learning that each fruit and vegetable gives us nutritional benefits Learning to use, store and clean a knife safely</p>
Year 6	<p data-bbox="315 1265 748 1437">Structures (Woodwork – Photo Frame Incorporate angles – Joins, strengthening and reinforcing techniques)</p>	<ul data-bbox="837 1265 1397 1406" style="list-style-type: none"> • Use research to develop and inform the design of innovative, functional and appealing products that are fit for purpose and aimed at particular groups 	<p data-bbox="1464 1265 2069 1437"><u>Design</u> Designing a product featuring a variety of different structures, giving careful consideration to how the structures will be used, considering effective and ineffective designs</p>

	<p>Key Vocabulary:</p> <p>annotated sketch, design brief, design specification, prototype, function, functional, innovation, innovative, mock-up, prototype, purpose, research, user,</p> <p>frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent</p>	<ul style="list-style-type: none"> • Generate, develop, model and communicate ideas through discussion and annotated sketches • Investigate and analyse a range of existing products • Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work • Investigate and analyse a range of existing products • Select from and use a wide range of tools and equipment to perform practical tasks • Select from and use a wider range of materials and components including construction materials, according to their functional properties and aesthetic qualities • Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work • Apply understanding of how to strengthen, stiffen and reinforce complex structures • Inform the design of innovative, functional and appealing products, aimed at particular individuals or groups 	<p><u>Make</u></p> <p>Building a range of structures drawing upon new and prior knowledge of structures Measuring, marking and cutting wood to create a range of structures Using a range of materials to reinforce and add decoration to structures</p> <p><u>Evaluation</u></p> <p>Improving a design plan based on peer evaluation Testing and adapting a design to improve it as it is developed Identifying what makes a successful structure</p> <p><u>Technical Knowledge</u></p> <p>Knowing that structures can be strengthened by manipulating materials and shapes Identifying the shell structure in everyday life (cars, aeroplanes, tins, cans) Understanding man made and natural structures</p>
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