







Design and Technology MTP – Year 4-5 Autumn

Design & Create their own Pull Cord Bag

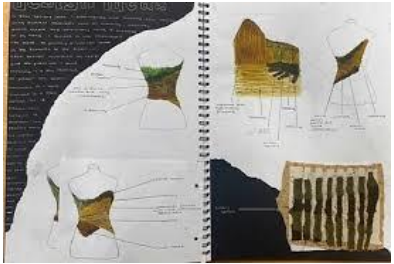

National Curriculum	Wk.	NC coverage	Knowledge and Skills	Key Vocab	Activity Outline
<p>To evidence D&T, a project booklet needs to be created along with a page in the floorbook designated to place picture evidence of the lessons.</p> <ol style="list-style-type: none"> 1. Front cover page – Design and Create a Light Up Toy 2. Lesson 1 – LO: To explore and evaluate an existing product 3. Lesson 2-4 – LO: To recap stitches (running, basting, invisible, back stitch) 4. Lesson 5 – LO: To design my product 5. Lesson 6-10 – LO: To make my product 6. Lesson 11 – LO: To evaluate my product 7. Assessment – LO: To create a poster of finishing techniques 					
<p>Purpose of study: Design and technology is an inspiring, rigorous and practical subject. Using creativity and imagination, pupils design and make products that solve real and relevant problems within a variety of contexts, considering their own and others' needs, wants and values. They acquire a broad range of subject knowledge and draw on disciplines such as mathematics, science, engineering, computing and art. Pupils learn how to take risks, becoming resourceful, innovative, enterprising and capable citizens. Through the evaluation of past and present design and technology, they develop a critical understanding of its impact on daily life and the wider world. High-quality design and technology education makes an essential contribution to the</p>	1	<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 • investigate and analyse a range of existing products 	<p>Year 4 coverage: I know why it is important to explore, develop and communicate design proposals by modelling ideas.</p> <p>Year 5 coverage: I know why it's important to generate ideas, considering the purposes for which they are designing.</p> <p>I know why it's important to have a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail.</p>	<p>Product</p> <p>Mood board</p> <p>Finishing techniques</p> <p>Prototype</p>	<p>LO: To explore and evaluate an existing product</p> <p>Project booklet and floorbook lesson</p> <p>Show children various different bags, with different elements. Encourage children to explore the products.</p> <p><i>How have they been made? What stitches have been used? What finishing techniques have been applied? What do they like?</i></p> <p>Explain to children that they are going to create a bag prototype for a local designer looking at supplying a new range of bags.</p> <p>Discuss with children the intended user, purpose and design criteria.</p> <p>Give children the opportunity to research and collect a mood board of materials, finishing techniques, sewing stitches, colours etc – this can be done on the computer or through cutting and sticking of images. E.g. →</p> <p>Children are to create their mood boards in their project booklet. You may need to provide magazines, newspapers etc. Ask the children beforehand to bring in magazines.</p>





<p>creativity, culture, wealth and well-being of the nation.</p> <p>Aims The national curriculum for design and technology aims to ensure that all pupils:</p> <ul style="list-style-type: none"> • develop the creative, technical and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world • build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality prototypes and products for a wide range of users • critique, evaluate and test their ideas and products and the work of others • understand and apply the principles of nutrition and learn how to cook. 	<p>2-4</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 	<p>Year 4 coverage: I know how to work safely and accurately with a range of simple tools.</p> <p>Year 5 coverage: I know why a wider range of materials and components should be carefully chosen, including construction materials, textiles, according to their functional properties and aesthetic qualities.</p>	<p>Running stitch</p> <p>Basting stitch</p> <p>Invisible stitch</p> <p>Back stitch</p>	<p>LO: To recap stitches (running, basting, invisible, back stitch)</p> <p>Project booklet and floorbook lesson</p> <p>Remind children of the stitches that they already know and have developed skills in – basting, invisible, running and backstitch.</p> <div style="display: flex; justify-content: space-around;">   </div> <div style="display: flex; justify-content: space-around;">   </div> <p>Give children the opportunity to re-practise those skills on a piece of material. This can be kept in their project booklets to showcase their prototype development.</p> <p>Discuss different bag elements e.g. button, pull cord or zip. Discuss different ways that these can be attached and secured so that they are functional. Model each one and give children the opportunity to practise the key skills needed to apply these.</p>
<p>Key stage 2 Through a variety of creative and practical activities, pupils should be taught the knowledge, understanding and skills needed to engage in an iterative process of designing and making. They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider</p>	<p>5</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, 	<p>Year 4 coverage: I know why it's important to have a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail.</p>	<p>Design</p> <p>Product</p> <p>Intended user</p> <p>Purpose</p> <p>Design criteria</p>	<p>LO: To design my product</p> <p>Project booklet and floorbook lesson</p> <p>Remind children of the intended user, purpose and design criteria.</p> <p>Model designing a product, labelling the materials, finishing techniques, tools and stitches. Also identify whether they are to support the functional element of their product or purely for aesthetic.</p> <p>Give children the opportunity to design their product, labelling key components. Encourage children to add samples of their materials to their design page to show the materials used.</p>



<p>environment]. When designing and making, pupils should be taught to:</p> <p>Design:</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 	<p>annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p>	<p>Year 5 coverage: I know why it's important to generate ideas, considering the purposes for which I am designing.</p>		<p>Ensure that children are labelling their product.</p> 
<p>Make</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 <p>Make</p> <ul style="list-style-type: none"> • 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>Evaluate</p> <ul style="list-style-type: none"> • 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 	<p>6-10</p> <ul style="list-style-type: none"> • 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 • apply their understanding of how to strengthen, stiffen and reinforce more complex structures 	<p>Year 4 coverage: I know why it is important to develop a clear idea of what has to be done, planning how to use materials, equipment and processes, and suggesting alternative methods of making, if the first attempts fail.</p> <p>Year 5 coverage: I know why a wider range of materials and components should be carefully chosen, including construction materials, textiles, according to their functional properties and aesthetic qualities.</p>	<p>Make</p> <p>Accuracy</p> <p>Finishing techniques</p>	<p>LO: To make my product</p> <p>Project booklet and floorbook lesson</p> <p>Discuss the importance of accuracy within their products- accuracy within measuring materials, cutting materials etc.</p> <p>Explain various finishing techniques.</p>  <p>Allow children to complete their bag prototype, support where needed. Provide the children/ ask for donations of fabrics. Provide with buttons.</p> <p>Remind children of the importance of reflecting and analysing their product during the making process.</p> <p>How could they change their process if something isn't working etc.</p>



<p>improve their work</p> <ul style="list-style-type: none"> • understand how key events and individuals in design and technology have helped shape the world <p>Technical Knowledge:</p> <ul style="list-style-type: none"> • 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 	11	<ul style="list-style-type: none"> • 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 	<p>Year 4 coverage: I know why it is important to evaluate my work both during and at the end of the assignment.</p> <p>I know how to evaluate my product carrying out appropriate tests and using the data collected from participants to collate into pie charts.</p> <p>Year 5 coverage: I know why it is important to evaluate products and identify criteria that can be used for their own designs.</p>		<p>LO: To evaluate my product</p> <p>Project booklet and floorbook lesson</p> <p>Remind children of the design criteria, intended user and purpose.</p> <p>Ask children to reflect and discuss their final product with one of their peers. Identifying skills they've secured, strengths within their product and improvements that they would like to make.</p> <p>Let children independently evaluate their product using question scaffold support that they need to answer and justify.</p> <p>Give children the opportunity to take their product to the 'shop' and persuade them to choose their product. Discussing the strengths in the design, what makes the bag good and how it is functional.</p> <p>Peer Evaluation Questionnaire Feedback and Analysis</p>
<p>Cooking and nutrition</p> <p>As part of their work with food, pupils should be taught how to cook and apply the principles of nutrition and healthy eating. Instilling a love of cooking in pupils will also open a door to one of the great expressions of human creativity. Learning how to cook is a crucial life skill that enables pupils to feed themselves and others affordably and well, now and in later life. Pupils should be taught to:</p> <ul 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 	12 – end	<p>Assessment</p> <p>Children are to create a poster outlining the finishing techniques that they have learnt during this project:</p> <ul style="list-style-type: none"> • Running stitch • Basting stitch • Invisible stitch • Back stitch <p>Provide the children with their project booklets to refer back to.</p>			<p style="text-align: center;">DESIGN AND TECHNOLOGY ASSESSMENT</p>



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<p>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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