


Subject - DT 	Year 3 Topics:	Autumn <b>Food technology – healthy sandwiches</b>	Spring <b>Purses / (**Trialling of stockings agreed for year 23-24 to review in July 2024**)</b>	Summer <b>Photo frames – freestanding structures.</b>
<p style="text-align: center;"><b><u>Intent</u></b></p> <p>We want our children to leave Ravensdale having been engaged and intrigued by DT and understand the range of opportunities that DT can give them. They leave being able to make things and are interested in this area whether it be as a career, hobby or further education opportunity. Our children can take risks, be resourceful, reflect on their accomplishments as well as the challenges they have faced. They can talk about the impact of DT on daily life in the wider world.</p>		<p style="text-align: center;"><b><u>Implementation</u></b></p> <p>DT will be taught through a variety of ways. This will include teacher modelling, exploring, and researching example models. Children will experience a design phase which makes links to Science and Maths. Projects will involve the use of a range of task-specific tools and materials. Children will be encouraged to take a resilient approach to the making stage and a reflective approach at the evaluating stage.</p>		<p style="text-align: center;"><b><u>Impact</u></b></p> <p>Children will apply DT skills and knowledge through new concepts. These skills will help with the development of creative, technical, and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. Children will build and apply a repertoire of knowledge, understanding and skills to design and make high-quality prototypes and products for a wide range of users. Children will become more aware of the need to critique, evaluate and test their ideas and products and the work of others. Understanding and applying the principles of nutrition and learning how to cook will be key skills learnt.</p>


Prior learning	Future learning in Year 4
<ul style="list-style-type: none"> <li>• Design purposeful, functional, appealing products for themselves and other users based on design criteria.</li> <li>• Select from and use a wide range of materials and components, including construction materials, textiles, and ingredients, according to their characteristics.</li> <li>• Explore and evaluate a range of existing products.</li> <li>• Evaluate their ideas and products against design criteria.</li> <li>• Explore and use mechanisms [for example, levers, sliders, wheels, and axles], in their products.</li> </ul>	<ul style="list-style-type: none"> <li>• Produce a plan and explain it.</li> <li>• Persevere and adapt work when needed.</li> <li>• Communicate ideas in a range of ways.</li> <li>• Knowledge of suitable tools and materials.</li> <li>• Evaluate and suggest improvements based on purpose and appearance.</li> <li>• Use electrical systems to enhance quality.</li> <li>• Know how to hygienic and use safe food practices.</li> </ul>

What pupils need to know or do to be secure				
Designing	Making	Evaluating	Technical Knowledge	Food Technology
Key learning / knowledge	Key learning /knowledge	Key learning / knowledge/skills	Key learning / knowledge/skills	Key learning / knowledge/skills
<p>Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded</p>	<p><i>Select from and use a wider range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing), accurately select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.</i></p>	<p><i>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.</i></p>	<p><i>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</i></p> <p><i>Apply their understanding of computing to program, monitor and control their products.</i></p>	<p><i>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.</i></p>

diagrams prototypes, pattern pieces and computer-aided design.				
<ul style="list-style-type: none"> <li>• Prove that a design meets a set criteria.</li> <li>• Design a product and make sure that it looks attractive.</li> <li>• Choose a material for both its suitability and its appearance.</li> </ul>	<ul style="list-style-type: none"> <li>• Follow a step by step plan, choosing the right equipment and materials.</li> <li>• Select the most appropriate tools and techniques for a given task.</li> <li>• Work accurately to measure, make cuts and make holes.</li> </ul>	<ul style="list-style-type: none"> <li>• Explain how to improve a finished model.</li> <li>• Know why a model has, or has not been, successful.</li> </ul>	<ul style="list-style-type: none"> <li>• Know how to strengthen a product by stiffening a given part or reinforce a part of the structure.</li> <li>• Use a simple IT program within the design.</li> </ul>	<ul style="list-style-type: none"> <li>• Describe how food ingredients come together.</li> <li>• Weigh out ingredients and follow a given recipe to create a dish.</li> <li>• Talk about which food is healthy and which is not.</li> <li>• Know when food is ready for harvesting.</li> </ul>

Y3 Specific Skills	Vocabulary	Design Skills	Making Skills	Evaluating Skills	Technical Knowledge
Purses / (stockings trial for academic year 23-24)	<ul style="list-style-type: none"> <li>. design</li> <li>. materials</li> <li>. tools</li> <li>. measure</li> <li>. thread</li> <li>. accuracy</li> <li>. measure</li> <li>. evaluate</li> </ul>	<ul style="list-style-type: none"> <li>• Prove that a design meets a set criteria.</li> <li>• Design a pencil case / placemat and make sure that it looks attractive.</li> </ul>	<ul style="list-style-type: none"> <li>• Follow a step by step plan, choosing the right equipment and materials.</li> <li>• Select the most appropriate tools and techniques for a given task.</li> <li>• Work accurately to create lines of stitches</li> <li>• How to thread a needle</li> <li>• If making a pencil case, how to use blanket stitching around the border to fold the ends together, and how to attach a button to their pencil case.</li> <li>• needle threading skills</li> </ul>	<ul style="list-style-type: none"> <li>• Explain how to improve a finished pencil case / mat.</li> <li>• Know why their pencil case / mat has, or has not been, successful.</li> </ul>	<ul style="list-style-type: none"> <li>• begin and end a line of stitches correctly by going through the first and last stitches twice</li> </ul>
Photograph Frames	<ul style="list-style-type: none"> <li>. design</li> <li>. materials</li> <li>. tools</li> <li>. measure</li> <li>. accuracy</li> <li>. measure</li> <li>. strengthen</li> <li>. evaluate</li> </ul>	<ul style="list-style-type: none"> <li>• Prove that a design meets a set criteria – for example, for a given audience/purpose</li> <li>• Design a self-standing product and make sure that it looks attractive.</li> <li>• Choose a material for both its suitability and its appearance.</li> </ul>	<ul style="list-style-type: none"> <li>• Follow a step by step plan to make the frame, choosing the right equipment and materials.</li> <li>• Select the most appropriate tools and techniques for a given task.</li> <li>• Work accurately to measure, make cuts and make holes.</li> </ul>	<ul style="list-style-type: none"> <li>• Explain how to improve a finished frame.</li> <li>• Know why their frame has, or has not been, successful.</li> <li>• Photograph each step of the</li> </ul>	<ul style="list-style-type: none"> <li>• How to strengthen, stiffen and reinforce structures, eg, practise folding, rolling paper to make it stronger.</li> <li>• Use prototypes to test ideas</li> </ul>

				process where possible	
Food Technology	<ul style="list-style-type: none"> <li>. recipe</li> <li>. ingredients</li> <li>. utensils</li> <li>. measure</li> <li>. weigh</li> <li>. accuracy</li> <li>. measure</li> </ul>	<ul style="list-style-type: none"> <li>• Design a recipe which meets a set criteria.</li> <li>• Design a sandwich and make sure that it contains the main food groups.</li> <li>• Choose ingredients for their nutritiousness and taste</li> </ul>	<ul style="list-style-type: none"> <li>• Follow a step by step recipe, choosing the right equipment and ingredients.</li> <li>• Select the most appropriate tools and techniques for a given task.</li> <li>• Work accurately to make sandwich neat and appetizing.</li> </ul>	<ul style="list-style-type: none"> <li>• Explain how to improve a finished sandwich.</li> <li>• Know why their sandwich has, or has not been, successful.</li> </ul>	<ul style="list-style-type: none"> <li>• Hygiene rules discussed and agreed</li> <li>• Understand the need for safety with certain tools, eg, children's knives.</li> </ul>

Subject - DT		Autumn	Spring	Summer
	Year 4 Topics:	<b>Building Bridges (construction)</b>	<b>Food – Cookies</b>	<b>Sheet pop-up books / mechanical posters</b>

<b>Intent</b> We want our children to leave Ravensdale having been engaged and intrigued by DT and understand the range of opportunities that DT can give them. They leave being able to make things and are interested in this area whether it be as a career, hobby or further education opportunity. Our children can take risks, be resourceful, reflect on their accomplishments as well as the challenges they have faced. They can talk about the impact of DT on daily life in the wider world.	<b>Implementation</b> DT will be taught through a variety of ways. This will include teacher modelling, exploring, and researching example models. Children will experience a design phase which makes links to Science and Maths. Projects will involve the use of a range of task-specific tools and materials. Children will be encouraged to take a resilient approach to the making stage and a reflective approach at the evaluating stage.	<b>Impact</b> Children will apply DT skills and knowledge through new concepts. These skills will help with the development of creative, technical, and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. Children will build and apply a repertoire of knowledge, understanding and skills to design and make high-quality prototypes and products for a wide range of users. Children will become more aware of the need to critique, evaluate and test their ideas and products and the work of others. Understanding and applying the principles of nutrition and learning how to cook will be key skills learnt.
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Prior learning from Year 3	Future learning in Year 5
<ul style="list-style-type: none"> <li>• Prove a design meets a set of criteria.</li> <li>• Choose a material for its suitability and appearance.</li> <li>• Follow a step by step plan.</li> <li>• Select appropriate tools and work accurately to measure.</li> <li>• Know why a model has or has not been successful.</li> <li>• Know how to strengthen a product by stiffening a given part or reinforce a part of a structure.</li> <li>• Weigh out ingredients and follow a recipe for a given dish.</li> </ul>	<ul style="list-style-type: none"> <li>• Explore ideas after collecting information.</li> <li>• Produce a detailed step-by-step plan.</li> <li>• Use a range of tools competently.</li> <li>• Design and make a product that relies on pulleys and gears.</li> <li>• Suggest alternative plans and evaluate function against original criteria.</li> <li>• Know how to prepare a meal and know which season various foods are available for harvesting.</li> </ul>


What pupils need to know or do to be secure				
Designing	Making	Evaluating	Technical Knowledge	Food Technology
Key learning / knowledge	Key learning /knowledge	Key learning / knowledge/skills	Key learning / knowledge/skills	Key learning / knowledge/skills
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.	<i>Select from and use a wider range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing), accurately select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.</i>	<i>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.</i>	<i>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).</i>	<i>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.</i>

			<i>Apply their understanding of computing to program, monitor and control their products.</i>	
<ul style="list-style-type: none"> <li>• Use ideas from other people when designing.</li> <li>• Produce a plan and explain it.</li> <li>• Persevere and adapt work when original ideas do not work.</li> <li>• Communicate ideas in a range of ways including by sketches and drawings which are annotated.</li> </ul>	<ul style="list-style-type: none"> <li>• Know which tools to use for a particular task and show knowledge of handling the tool.</li> <li>• Know which material is likely to give the best outcome.</li> <li>• Measure accurately.</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluate and suggest improvements for design.</li> <li>• Evaluate products for both their purpose and appearance.</li> <li>• Explain how the original design has been improved.</li> <li>• Present a product in an interesting way.</li> </ul>	<ul style="list-style-type: none"> <li>• Links scientific knowledge by using lights, switches or buzzers.</li> <li>• Use electrical systems to enhance the quality of the product.</li> <li>• Use of IT, where appropriate, to add to the quality of the product.</li> </ul>	<ul style="list-style-type: none"> <li>• Know how to be both hygienic and safe when using food.</li> <li>• Bring a creative element to the food product being designed.</li> </ul>

Y4 Specific Skills	Vocabulary	Design Skills	Making Skills	Evaluating Skills	Technical Knowledge
Building bridges	<ul style="list-style-type: none"> <li>. beams</li> <li>. span</li> <li>. construction</li> <li>. girders</li> <li>. parapet</li> <li>. abutments</li> <li>. trusses</li> <li>. compression</li> <li>. gravity</li> <li>. pillars</li> <li>. engineer</li> <li>. arches</li> <li>. rot</li> <li>. brittle</li> <li>. shatter</li> <li>. tension</li> <li>. suspension bridge</li> <li>. prototype</li> </ul>	<ul style="list-style-type: none"> <li>• Use ideas from other people when designing by investigating similar products.</li> <li>• Produce a step-by-step design and explain it.</li> <li>• Persevere and adapt work if original ideas do not work.</li> <li>• Communicate ideas in a range of ways including by sketches and drawings which are annotated.</li> <li>• Know which materials and components are likely to give the best outcome and add notes to drawings to help explanations.</li> </ul>	<ul style="list-style-type: none"> <li>• Follow a step by step plan, choosing the right equipment and materials.</li> <li>• Know which tools to use for a particular task and show knowledge of handling the tool.</li> <li>• Create shell or frame structures, producing a prototype.</li> <li>• Make my bridge structure more secure by giving it a wide base.</li> <li>• Measure and mark a square section, strip and dowel to the nearest 1cm.</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluate and suggest improvements for design and finished bridge, including how well it meets the design criteria.</li> <li>• Evaluate products for both their purpose and appearance.</li> <li>• Explain how the original design has been improved.</li> <li>• Present a product in an interesting way.</li> </ul>	<ul style="list-style-type: none"> <li>• Links scientific knowledge by using knowledge of materials and their properties.</li> <li>• Use mechanical systems to enhance the quality of the product.</li> <li>• Use of ICT, where appropriate, to add to the quality of the bridge.</li> </ul>

	. analyse		<ul style="list-style-type: none"> <li>• Use a glue gun with adult supervision.</li> <li>• Refer to my design as I make my bridge, but alter it if I need to.</li> </ul>		
Food – cookies	<ul style="list-style-type: none"> <li>. investigate</li> <li>. research</li> <li>. evaluate</li> <li>. consumer</li> <li>. quality</li> <li>. specification</li> <li>. *names of utensils</li> <li>. quality control</li> <li>. texture</li> <li>. flavour</li> </ul>	<ul style="list-style-type: none"> <li>• Use ideas from other people when designing my cookie.</li> <li>• Produce a step-by-step design and explain it.</li> <li>• Persevere and adapt my recipe if original ideas do not work.</li> <li>• Communicate ideas in a range of ways including by sketches and drawings which are annotated.</li> <li>• To work successfully in a team, including good listening skills.</li> </ul>	<ul style="list-style-type: none"> <li>• Know which utensils to use for a particular task and show knowledge of handling the utensils.</li> <li>• Know which ingredients are likely to give the best cookie.</li> <li>• Measure ingredients accurately</li> <li>• To follow a recipe accurately.</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluate and suggest improvements to cookie.</li> <li>• Evaluate cookies for both their purpose and appearance.</li> <li>• Explain how the original design has been improved.</li> <li>• Present their cookies in an interesting way.</li> </ul>	<ul style="list-style-type: none"> <li>• Links scientific knowledge by using good food hygiene principles. throughout.</li> <li>• Use of IT, where appropriate, to research different types of cookie to add to the quality of the recipe.</li> <li>• Be aware of health and safety when cooking.</li> <li>• To understand the principles of a varied diet and what a healthy meal is, including appropriate vocabulary.</li> </ul>
Sheet pop up books / mechanical posters	<ul style="list-style-type: none"> <li>. moving mechanism</li> <li>. vertical</li> <li>. horizontal</li> <li>. diagonal</li> <li>. pop-up</li> <li>. spring</li> <li>. levers</li> <li>. linkages</li> <li>. evaluation</li> </ul>	<ul style="list-style-type: none"> <li>• Use ideas from other people when designing.</li> <li>• Produce a step-by-step design of a moving mechanism, using lolly sticks or card to make levers and linkage, and explain it. .</li> <li>• Persevere and adapt work if original ideas not do work.</li> <li>• Communicate ideas in a range of ways including by sketches and drawings which are annotated.</li> </ul>	<ul style="list-style-type: none"> <li>• Follow a step by step plan, choosing the right equipment and materials.</li> <li>• Know which tools to use for a particular task and show knowledge of handling the tool.</li> <li>• Know which material is likely to give the best outcome.</li> <li>• Make a moving mechanism, using lolly sticks or card, to make levers and linkages.</li> <li>• Measure, mark and cut slots accurately.</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluate and suggest improvements for design, recognising the strengths and weaknesses of their pop-up.</li> <li>• Evaluate products for both their purpose and appearance.</li> <li>• Explain how the original design has been improved.</li> <li>• Present a product in an interesting way.</li> </ul>	<ul style="list-style-type: none"> <li>• Links scientific knowledge by selecting suitable materials for their pop-up page/poster.</li> <li>• To know different methods to make a pop-up and spring.</li> <li>• Use of ICT, where appropriate, to research their product, and to add to the quality of the product.</li> </ul>

			<ul style="list-style-type: none"><li>• Join materials to make a pop-up, with some accuracy.</li><li>• To apply a range of finishing techniques.</li></ul>		
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Subject - DT		Autumn	Spring	Summer
	Year 5 Topics:	Rockets – mechanism – pneumatics / sheet materials	Victorian Puddings	Biomes Textiles - sewing

<p style="text-align: center;"><b>Intent</b></p> <p>We want our children to leave Ravensdale having been engaged and intrigued by DT and understand the range of opportunities that DT can give them. They leave being able to make things and are interested in this area whether it be as a career, hobby or further education opportunity. Our children can take risks, be resourceful, reflect on their accomplishments as well as the challenges they have faced. They can talk about the impact of DT on daily life in the wider world.</p>	<p style="text-align: center;"><b>Implementation</b></p> <p>DT will be taught through a variety of ways. This will include teacher modelling, exploring, and researching example models. Children will experience a design phase which makes links to Science and Maths. Projects will involve the use of a range of task-specific tools and materials. Children will be encouraged to take a resilient approach to the making stage and a reflective approach at the evaluating stage.</p>	<p style="text-align: center;"><b>Impact</b></p> <p>Children will apply DT skills and knowledge through new concepts. These skills will help with the development of creative, technical, and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. Children will build and apply a repertoire of knowledge, understanding and skills to design and make high-quality prototypes and products for a wide range of users. Children will become more aware of the need to critique, evaluate and test their ideas and products and the work of others. Understanding and applying the principles of nutrition and learning how to cook will be key skills learnt.</p>
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Prior learning in Year 4	Future learning in Year 6
<ul style="list-style-type: none"> <li>• Produce a plan and explain it.</li> <li>• Persevere and adapt work when needed.</li> <li>• Communicate ideas in a range of ways.</li> <li>• Knowledge of suitable tools and materials.</li> <li>• Evaluate and suggest improvements based on purpose and appearance.</li> <li>• Use electrical systems to enhance quality.</li> <li>• Know how to hygienic and use safe food practices.</li> </ul>	<ul style="list-style-type: none"> <li>• Use market research to inform plans and ideas.</li> <li>• Justify planning in a convincing way.</li> <li>• Use any tool safely and correctly.</li> <li>• Know how to test and evaluate designed products.</li> <li>• Use electrical systems correctly and accurately.</li> <li>• Explain how food ingredients should be stored and work within a budget for a meal.</li> </ul>

What pupils need to know or do to be secure				
Designing	Making	Evaluating	Technical Knowledge	Food Technology
Key learning / knowledge	Key learning /knowledge	Key learning / knowledge/skills	Key learning / knowledge/skills	Key learning / knowledge/skills
<p>Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups. 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><i>Select from and use a wider range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing), accurately select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.</i></p>	<p><i>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.</i></p>	<p><i>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Apply their understanding of computing to program, monitor and control their products.</i></p>	<p><i>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.</i></p>




<ul style="list-style-type: none"> <li>• Come up with a range of ideas after collecting information from different sources.</li> <li>• Produce a detailed step-by-step plan.</li> <li>• Explain how a product will appeal to a specific audience.</li> </ul>	<ul style="list-style-type: none"> <li>• Use a range of tools and equipment competently.</li> <li>• Make a prototype before making a final version.</li> </ul>	<ul style="list-style-type: none"> <li>• Suggest alternative plans; outlining the positive features and draw backs.</li> <li>• Evaluate appearance and function against original criteria.</li> </ul>	<ul style="list-style-type: none"> <li>• Links scientific knowledge to design by using pneumatics.</li> </ul>	<ul style="list-style-type: none"> <li>• Be both hygienic and safe in the kitchen.</li> <li>• Know how to prepare a meal by collecting the ingredients in the first place.</li> <li>• Know which season various foods are available for harvesting.</li> </ul>

Y5 Specific Skills	Vocabulary	Design Skills	Making Skills	Evaluating Skills	Technical Knowledge
Victorian Puddings -	<ul style="list-style-type: none"> <li>. recipe</li> <li>. names of utensils</li> <li>. names of ingredients</li> </ul>	<ul style="list-style-type: none"> <li>• Come up with a range of ideas after collecting information from different on Victorian puddings from different sources, such as: brown bread ice cream, Victoria Sandwich, Kedgree, Spotted Dick, Gruel.</li> <li>• Produce a step-by-step recipe and explain it.</li> <li>• Explain how their pudding will appeal to a specific audience.</li> </ul>	<ul style="list-style-type: none"> <li>• Use a range of utensils and ingredients competently.</li> <li>• Use accurate measuring skills</li> <li>• Know which ingredients are likely to give the best outcome.</li> <li>• To follow a recipe accurately.</li> </ul>	<ul style="list-style-type: none"> <li>• Suggest alternative pudding ingredient recipes; outlining the positive features and draw backs.</li> <li>• Evaluate appearance and taste.</li> </ul>	<ul style="list-style-type: none"> <li>• Be both hygienic and safe in the kitchen.</li> <li>• Know how to prepare a meal by collecting the ingredients in the first place.</li> <li>• Know which season various foods are available for harvesting.</li> </ul>
Pneumatics - pop up space toy (see additional sheet)	<a href="https://www.stpatricksandstrigidsprimary.co.uk/pneumatics-stem-project-designing-and-building-a-p/">https://www.stpatricksandstrigidsprimary.co.uk/pneumatics-stem-project-designing-and-building-a-p/</a> <ul style="list-style-type: none"> <li>. durable</li> <li>. strongest</li> <li>. weakest</li> <li>. tools</li> <li>. tubing</li> </ul>	<ul style="list-style-type: none"> <li>• Come up with a range of ideas after collecting information from different sources.</li> <li>• Produce a detailed step-by- step plan for</li> </ul>	<ul style="list-style-type: none"> <li>• Follow a step by step plan, choosing the right equipment and materials.</li> </ul>	<ul style="list-style-type: none"> <li>• Outline the positive features and draw backs of different toy designs.</li> </ul>	<ul style="list-style-type: none"> <li>• Links scientific knowledge to design by using pneumatics</li> <li>• To relate their learning to real life.</li> </ul>

	<ul style="list-style-type: none"> <li>. syringe</li> <li>. plunger</li> <li>. pneumatic</li> <li>. hydraulic</li> </ul>	<p>their toy including pneumatics and resources appropriate to the task.</p> <ul style="list-style-type: none"> <li>• Explain how their toy will appeal to a specific audience.</li> </ul>	<ul style="list-style-type: none"> <li>• Use a range of tools and equipment competently and safely.</li> <li>• To make a simple mechanism.</li> <li>• To cut accurately and safely along a marked line.</li> <li>• To join and combine materials with temporary, fixed or moving joints.</li> <li>• Make a prototype of the mechanism before making a final version.</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluate appearance and function of toy against original criteria.</li> </ul>	
<p>Biomes Textiles - sewing</p>	<ul style="list-style-type: none"> <li>. needle/thread</li> <li>. stitch</li> <li>. combining</li> <li>. names of materials</li> <li>. embroidery</li> <li>. tapestry</li> <li>. Historical stories represented</li> </ul>	<ul style="list-style-type: none"> <li>• Come up with a range of ideas after collecting information from different sources.</li> <li>• Produce a step-by-step design of the tapestry and explain it.</li> <li>• Explain how their tapestry will appeal to a specific audience.</li> </ul>	<ul style="list-style-type: none"> <li>• Follow a step by step plan.</li> <li>• Use a range of tools and equipment competently.</li> <li>• Make a prototype before making a final version.</li> <li>• Create a 3D product using pattern pieces and seam allowance</li> <li>• Decorate textiles appropriately, often before joining components</li> </ul>	<ul style="list-style-type: none"> <li>• Sketch and model alternative ideas; outlining the positive features and draw backs.</li> <li>• Evaluate appearance and function against original criteria.</li> </ul>	<ul style="list-style-type: none"> <li>• Knowing about tapestry and how these are created.</li> <li>• Historical knowledge of the Bayeux tapestry and its significance.</li> <li>• Knowing the different ways textiles can be joined, and selecting best ways to join materials together</li> </ul>

			<ul style="list-style-type: none"> <li>• Pin and tack (of fabric pieces)</li> <li>• Needle threading skills</li> <li>• Securing thread to materials</li> <li>• Join fabrics using a range of different stitches</li> </ul>		
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Subject - DT		Autumn	Spring	Summer
	Year 6 Topics:	<b>Wooden Frames</b>	<b>Fair Trade Recipes</b>	<b>Motor and Switch Fairground rides</b>
<p><b>Intent</b></p> <p>We want our children to leave Ravensdale having been engaged and intrigued by DT and understand the range of opportunities that DT can give them. They leave being able to make things and are interested in this area whether it be as a career, hobby or further education opportunity. Our children can take risks, be resourceful, reflect on their accomplishments as well as the challenges they have faced. They can talk about the impact of DT on daily life in the wider world.</p>		<p><b>Implementation</b></p> <p>DT will be taught through a variety of ways. This will include teacher modelling, exploring, and researching example models. Children will experience a design phase which makes links to Science and Maths. Projects will involve the use of a range of task-specific tools and materials. Children will be encouraged to take a resilient approach to the making stage and a reflective approach at the evaluating stage.</p>		<p><b>Impact</b></p> <p>Children will apply DT skills and knowledge through new concepts. These skills will help with the development of creative, technical, and practical expertise needed to perform everyday tasks confidently and to participate successfully in an increasingly technological world. Children will build and apply a repertoire of knowledge, understanding and skills to design and make high-quality prototypes and products for a wide range of users. Children will become more aware of the need to critique, evaluate and test their ideas and products and the work of others. Understanding and applying the principles of nutrition and learning how to cook will be key skills learnt.</p>

<b>Prior learning in Year 5</b>	<b>Future learning in Year 7</b>
<ul style="list-style-type: none"> <li>• Explore ideas after collecting information.</li> <li>• Produce a detailed step-by-step plan.</li> <li>• Use a range of tools competently.</li> <li>• Design and make a product that relies on pulleys and gears.</li> </ul>	<ul style="list-style-type: none"> <li>• Use research and exploration, such as the study of different cultures, to identify and understand user needs.</li> <li>• Develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations.</li> </ul>

- Suggest alternative plans and evaluate function against original criteria.
- Know how to prepare a meal and know which season various foods are available for harvesting.

- Select from and use a wider, more complex range of materials, components and ingredients, taking into account their properties.
- Analyse the work of past and present professionals and others to develop and broaden their understanding.
- Investigate new and emerging technologies.
- Become competent in a range of cooking techniques.

### What pupils need to know or do to be secure

Designing	Making	Evaluating	Technical Knowledge	Food Technology
Key learning / knowledge	Key learning /knowledge	Key learning / knowledge/skills	Key learning / knowledge/skills	Key learning / knowledge/skills
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.	<i>Select from and use a wider range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing), accurately select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.</i>	<i>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.</i>	<i>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.</i>	<i>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.</i>
<ul style="list-style-type: none"> <li>• Use market research to inform plans and ideas.</li> <li>• Follow and refine original plans.</li> <li>• Justify planning in a convincing way.</li> <li>• Show that culture and society is considered in plans and designs.</li> </ul>	<ul style="list-style-type: none"> <li>• Know which tool to use for a specific practical task.</li> <li>• Know how to use any tool correctly and safely.</li> <li>• Know what each tool is used for.</li> <li>• Explain why a specific tool is best for a specific action.</li> </ul>	<ul style="list-style-type: none"> <li>• Know how to test and evaluate designed products.</li> <li>• Explain how products should be stored and give reasons.</li> <li>• Evaluate product against clear criteria.</li> </ul>	<ul style="list-style-type: none"> <li>• Use electrical systems correctly and accurately to enhance a given product.</li> <li>• Know which IT product would further enhance a specific product.</li> <li>• Use knowledge to improve a made product by strengthening, stiffening or reinforcing.</li> </ul>	<ul style="list-style-type: none"> <li>• Explain how food ingredients should be stored and give reasons.</li> <li>• Work within a budget to create a meal.</li> <li>• Understand the difference between a savoury and sweet dish.</li> </ul>

Y6 Specific Skills	Vocabulary	Design Skills	Making Skills	Evaluating Skills	Technical Knowledge
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<p>Wooden Frames (photo frame)</p>	<ul style="list-style-type: none"> <li>. tenon saw</li> <li>. drill</li> <li>. coping saw</li> <li>. bench hook</li> <li>. attach</li> <li>. construct</li> <li>. frame</li> <li>. hinge</li> <li>. reinforce</li> <li>. butt</li> <li>. join</li> <li>. adhesive</li> </ul>	<ul style="list-style-type: none"> <li>• Use research to inform plans and ideas.</li> <li>• Produce a step-by-step design and explain it.</li> <li>• combine modelling and drawing to refine ideas</li> <li>• Justify the sheet material chosen.</li> <li>• Show that culture and society is considered in plans and designs.</li> </ul>	<ul style="list-style-type: none"> <li>• Follow a step by step plan.</li> <li>• Know which tool to use for a specific practical task.</li> <li>• Know how to use any tool correctly and safely, including using a saw and bench hook under one-to-one supervision</li> <li>• Know what each tool is used for.</li> <li>• How to cut a piece of wood.</li> <li>• How to join / attach pieces of wood together.</li> <li>• Explain why a specific tool is best for a specific action.</li> <li>• Using a ruler to measure accurately</li> <li>• Cut accurately and safely to a marked line</li> <li>• use a hand drill to drill tight and loose fit holes</li> <li>• Skills to reinforce and strengthen a 3D framework.</li> </ul>	<ul style="list-style-type: none"> <li>• Know how to test and evaluate designed products.</li> <li>• Explain how products should be stored and give reasons.</li> <li>• Evaluate product against clear criteria.</li> </ul>	<ul style="list-style-type: none"> <li>• investigate products or images to collect ideas</li> <li>• Know select the appropriate saw for cutting different types of wooden materials</li> <li>• How a box is created from a net</li> <li>• Explain the importance of a sturdy frame</li> <li>• Use knowledge to improve a made product by strengthening, stiffening or reinforcing.</li> </ul>
<p>Fair Trade Recipes</p>	<ul style="list-style-type: none"> <li>. hygiene</li> <li>. analyse</li> <li>. product appearance,</li> <li>. shape, ingredients, taste, flavour, texture, mouth-feel,</li> </ul>	<ul style="list-style-type: none"> <li>• Use market research to inform ideas for recipes.</li> <li>• Produce a step-by-step recipe, explain and justify it.</li> </ul>	<ul style="list-style-type: none"> <li>• To follow a more complex recipe accurately.</li> <li>• Know which utensil to use for a specific task.</li> <li>• Know how to use any utensil correctly and safely.</li> </ul>	<ul style="list-style-type: none"> <li>• Taste and evaluate designed meal.</li> <li>• Explain how ingredients / meal should be stored and give reasons.</li> </ul>	<ul style="list-style-type: none"> <li>• Explain how food ingredients should be stored and give reasons.</li> <li>• Work within a budget to create a meal.</li> <li>• Understand the difference between a</li> </ul>

	<p>sweet savoury spicy crusty doughy hard soft chewy crisp heavy soft moist dry</p> <p>crumbly rough smooth rounded flat long</p> <p>design specification</p> <p>recipe quantity measuring sieving mixing kneading shaping greasing proving glazing baking dough consistency</p> <p>evaluate</p>	<ul style="list-style-type: none"> <li>• Justify recipe ideas in a convincing way.</li> <li>• Show that culture and society is considered in plans and designs.</li> </ul>	<ul style="list-style-type: none"> <li>• Know what each utensil is used for.</li> <li>• Explain why a specific utensil is best for a specific action.</li> </ul>	<ul style="list-style-type: none"> <li>• Evaluate food created against clear criteria.</li> </ul>	<p>savoury and sweet dish.</p>
<p>Motor and Switch Fairground rides</p>	<ul style="list-style-type: none"> <li>• Gears</li> <li>• Pulley</li> <li>• Cam</li> <li>• Lever</li> <li>• linkage</li> <li>• series circuits</li> <li>• switches</li> <li>• bulbs</li> <li>• buzzers</li> <li>• motors</li> </ul>	<ul style="list-style-type: none"> <li>• Use market research to inform plans and ideas for a fairground ride.</li> <li>• Produce a step-by-step design, using cams and / or circuits, and explain it.</li> <li>• Justify their planning in a convincing way.</li> </ul>	<ul style="list-style-type: none"> <li>• Follow a step by step plan.</li> <li>• Make their working fairground ride.</li> <li>• Know which tool to use for a specific practical task.</li> <li>• Know how to use any tool correctly and safely.</li> <li>• Explain why a specific tool is best for a specific action.</li> </ul>	<ul style="list-style-type: none"> <li>• Know how to test and evaluate finished fairground ride</li> <li>• Evaluate fairground ride against clear criteria.</li> </ul>	<ul style="list-style-type: none"> <li>• Use electrical systems correctly and accurately to enhance a given product.</li> <li>• Use knowledge to improve a made product by strengthening, stiffening or reinforcing.</li> </ul>