

**Year 1**  
**Progression in Design Technology Grid**

	Autumn 1	Autumn 2	Spring	Summer
Topic	Structures Penguins with plastic bottles	Mechanisms Book Nibbling Monster/Flanimal	Textiles Designing and Making Kites	Food Technology Creating a Fruit Kebab
<b>Prior knowledge</b>	<p>Know that ideas that can be imagined can also be brought to life, the children have access to modelling materials, building resources, construction blocks and tools.</p> <p>Able to enhance play with things that they have made in the modelling area, puppets, cameras, kites</p> <p>Practise bringing stories to life using enhancements that they have made, e.g. aliens love underpants, we are going on a bear hunt.</p> <p>Know that they can plan a creation before they go ahead and make, using plan, do, review method.</p>			
<b>Prior skills</b>	<p>Most children will have:</p> <p>Used various construction materials.</p> <p>Constructed with a purpose in mind, using a variety of resources.</p> <p>Begun to construct, stacking blocks vertically and horizontally, making enclosures and creating spaces.</p>	<p>Most children will have:</p> <p>Used simple tools and techniques competently and appropriately.</p> <p>Joined construction pieces together to build and balance.</p> <p>Selected tools and techniques needed to shape, assemble and join materials they were using.</p>	<p>Most children will have:</p> <p>Used and explored a variety of materials, tools and techniques.</p> <p>Selected appropriate resources and adapted work where necessary.</p> <p>Realised tools can be used for a purpose.</p> <p>Represented their own ideas, thoughts and feelings through design and technology.</p>	<p>Most children will have:</p> <p>Experienced using or seeing measuring tools.</p> <p>Handled food and talked about food hygiene.</p>
<b>Vocabulary</b>	Draw, plan, evaluate, model, structure, cut, make, materials, design	Design, plan, evaluate, cut, mechanism, lever, slide, join	Design, plan, evaluate, strong, weak, material, cut, suitable, product, equipment	evaluate, ingredients, fruit, vegetable, cut
<b>Statutory requirements</b>	<p><b>Design</b> Design purposeful, functional, appealing products for themselves and other users based on design criteria Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</p> <p><b>Make</b> Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]. Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</p> <p><b>Evaluate</b> Explore and evaluate a range of existing products Evaluate their ideas and products against design criteria</p> <p><b>Technical knowledge</b> Build structures, exploring how they can be made stronger, stiffer and more stable Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p>			
<b>Skills covered</b>	<p><b>Design</b> Work confidently within a range of context, such as imaginary, story based, home, school, gardens,</p>	<p><b>Design</b> State what products they are designing and making. Use simple design criteria to help develop their ideas</p>	<p><b>Design</b> Describe the purpose of the product Say how the product will work Say how they will make the product suitable for the intended uses</p>	<p><b>Make</b> - Plan by suggesting what to do next.</p>

	<p>playground, local community, industry and the wider environment. Use simple design criteria to help develop their ideas. Generate own ideas for design by drawing on own experiences or from reading. Develop and share ideas by talking and drawing.</p> <p><b>Make</b> Plan by suggesting what to do next. Select from a range of tools and equipment explaining their choices. Follow procedures for safety. Use a range of components, including construction materials. Mark out, cut out and shape materials. Use simple fixing materials e.g. temporary - paper clips tape and permanent - glue, staples.</p> <p><b>Evaluate</b> Talk about their design ideas and what they are making. Make simple judgements about their products and ideas against design criteria.</p> <p><b>Technical Knowledge</b> Understand how freestanding structures can be made stronger, stiffer and more stable.</p>	<p>Generate own ideas for design by drawing on own experiences or from reading Develop and share ideas by talking and drawing Model ideas by exploring materials, components and making mock-ups</p> <p><b>Make</b> Select from a range of tools and equipment explaining their choices Follow procedures for safety Use a range of components, including construction materials Assemble, join and combine materials Use simple fixing materials e.g. temporary - paper clips tape and permanent - glue, staples Use finishing techniques, including those from art and design</p> <p><b>Evaluate</b> Talk about their design ideas and what they are making Make simple judgements about their products and ideas against design criteria Suggest how their products could be improved</p> <p><b>Technical Knowledge</b> Understand about the movement of simple mechanisms including levers, sliders (Year 1)</p>	<p>Use simple design criteria to help develop their ideas Model ideas by exploring materials, components and construction kits and making templates and mock-ups</p> <p><b>Make</b> Plan by suggesting what to do next Select from a range of materials and components according to their characteristics Use a range of components, including construction materials Mark out, cut out and shape materials Assemble, join and combine materials Use simple fixing materials e.g. temporary - paper clips tape and permanent - glue, staples Use finishing techniques, including those from art and design</p> <p><b>Evaluate</b> Make simple judgements about their products and ideas against design criteria Suggest how their products could be improved</p> <p><b>Technical Knowledge</b> Understand how freestanding structures can be made stronger, stiffer and more stable</p>	<p>- Select from a range of tools and equipment explaining their choices. - Follow procedures for safety and hygiene.</p> <p><b>Cooking and Nutrition</b> - Know that all food comes from plants or animals. - Group familiar food products e.g. fruit and vegetables. - Know that everyone should eat at least five portions of fruit and vegetables every day. - Prepare simple dishes safely and hygienically, without using a heat source.</p>
<p><b>Key performance indicators</b></p>	<ul style="list-style-type: none"> <li>- I can use words and pictures to plan.</li> <li>- I can design a product for myself following design criteria.</li> <li>- I can explain what I have made suggesting one positive thing and one improvement.</li> </ul>	<ul style="list-style-type: none"> <li>- I can think of some ideas of my own when designing.</li> <li>- I can use levers and slides in my work.</li> <li>- I can select tools and equipment to cut, shape, join and finish.</li> </ul>	<ul style="list-style-type: none"> <li>- I can choose the right materials to make my product.</li> <li>- I can say how to make my kite stronger.</li> <li>- I can talk about existing products and say what is good and not so good about them.</li> </ul>	<ul style="list-style-type: none"> <li>- I can cut food safely.</li> <li>- I can think of interesting ways to present my food.</li> <li>- I can name 3 healthy foods.</li> </ul>

**Year 2  
Progression in Design Technology Grid**

	Autumn	Spring	Summer
Topic	HEROES AND VILLAINS Mechanisms Build a Trap for a Giant	BE BRAVE! Textiles Puppets	OH, THE PLACES YOU CAN GO! Food Technology Bread
<b>Prior knowledge</b>	Understanding of the design process and following a design criteria. Knowledge of materials and their properties. Knowledge of the evaluation process.	Some pupils will have had experience of textiles through after school clubs and personal experience All pupils will have handled puppets during their time in reception. Pupils will have handled a range of materials in year 1 when kite making.	Pupils may have personal experience of baking and cooking at home. Pupils will have discussed food hygiene in reception and year 1 during food activities (making bread, gingerbread decorating etc).
<b>Prior skills</b>	Select from a range of materials and components according to their characteristics. Use a range of components, including construction materials. Mark out, cut out and shape materials. Assemble, join and combine materials. Use simple fixing materials e.g. temporary - paper clips tape and permanent - glue, staples. Evaluate a product.	Select from a range of materials and components according to their characteristics Use a range of components, including construction materials Mark out, cut out and shape materials Assemble, join and combine materials Use simple fixing materials e.g. temporary - paper clips tape and permanent - glue, staples Use finishing techniques, including those from art and design	Know that all food comes from plants or animals. Group familiar food products e.g. fruit and vegetables. Know that everyone should eat at least five portions of fruit and vegetables every day. Prepare simple dishes safely and hygienically, without using a heat source. Follow procedures for safety and hygiene.
<b>Vocabulary</b>	Axle, winding mechanism, stable, handle, turn	Template, fabric, cutting out, sewing, needle, gluing, puppet, stitch, thread,	Pinch, teaspoon, well, dough, knead, floured surface, topping
<b>Statutory requirements</b>	Design purposeful, functional, appealing products for themselves and other users based on design criteria Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of materials and components, including construction materials, Evaluate their ideas and products against design criteria Explore and use mechanisms such as wheels and axles in their products.	Design purposeful, functional, appealing products for themselves and other users based on design criteria Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of materials and components, including textiles Evaluate their ideas and products against design criteria	Generate, develop, model and communicate their ideas through talking, drawing, information and communication technology Select from and use a range of tools and equipment to perform practical tasks. Select from and use a wide range of ingredients Evaluate their ideas and products against design criteria

<p><b>Skills covered</b></p>	<p><b>Design</b></p> <ul style="list-style-type: none"> <li>-Work confidently within a range of context, such as imaginary and story based,</li> <li>-Describe the purpose of the trap</li> <li>-Say how the trap will work</li> <li>-Say how they will make the trap suitable for the intended uses</li> <li>-Use simple design criteria to help develop their ideas</li> <li>-Generate own ideas for design by drawing on own experiences or from reading</li> <li>-Use knowledge of existing products to help come up with ideas</li> </ul> <p><b>Make</b></p> <ul style="list-style-type: none"> <li>-select from a range of tools and equipment explaining their choices</li> <li>-select from a range of materials</li> <li>-follow procedures for safety</li> <li>-measure, mark out, cut out and shape materials and components</li> <li>-assemble, join and combine materials and components</li> <li>-use simple fixing materials e.g. Temporary - paper clips tape and permanent - glue, staples</li> <li>-use finishing techniques, including those from art and design</li> </ul> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>-talk about their design ideas and what they are making</li> <li>-make simple judgements about their trap and ideas against design criteria</li> <li>-suggest how their trap could be improved</li> </ul> <p><b>Technical knowledge</b></p> <ul style="list-style-type: none"> <li>-understand about the movement of simple mechanisms including wheels and axles (year 2)</li> <li>-understand how freestanding structures can be made stronger, stiffer and more stable</li> </ul>	<p><b>Design</b></p> <ul style="list-style-type: none"> <li>-Work confidently within a range of context, such as imaginary, story based,</li> <li>-Say who the product is for</li> <li>-Describe the purpose of the product</li> <li>-Use simple design criteria to help develop their ideas</li> <li>-Generate ideas for design by drawing on own experiences of puppets</li> <li>-Use knowledge of existing products to help come up with ideas</li> <li>-Develop and share ideas by talking and drawing</li> <li>-Use ICT, where appropriate, to develop and communicate their ideas</li> </ul> <p><b>Make</b></p> <ul style="list-style-type: none"> <li>-plan by suggesting what to do next</li> <li>-select from a range of tools and equipment explaining their choices</li> <li>-select from a range of materials</li> <li>- follow procedures for safety and hygiene</li> <li>-use and make own templates</li> <li>-use a range of components, including textiles,</li> <li>-measure, mark out, cut out and shape materials and components</li> <li>-assemble, join and combine materials and components</li> <li>-use finishing techniques, including those from art and design</li> </ul> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>-talk about their design ideas and what they are making</li> <li>-make simple judgements about their puppet and ideas against design criteria</li> <li>-suggest how their puppet could be improved</li> </ul> <p><b>Evaluate existing products</b></p> <ul style="list-style-type: none"> <li>-What products are</li> <li>-Who the products are for</li> <li>-What the products are for</li> <li>-How the products work</li> </ul>	<p><b>Cooking and nutrition</b></p> <ul style="list-style-type: none"> <li>-Know that food has to be farmed, grown or caught</li> <li>-Name and sort foods into the five groups of the 'eat well' plate</li> <li>-Understand where food comes from</li> <li>-Use appropriate equipment to weigh and measure ingredients</li> <li>-Prepare simple dishes safely and hygienically, without using a heat source</li> <li>-Use techniques such as cutting, peeling and grating with support</li> </ul> <p><b>Technical knowledge</b></p> <ul style="list-style-type: none"> <li>-Understand that food ingredients should be combined according to their sensory characteristics</li> <li>-Know the correct technical vocabulary for the projects they are undertaking</li> </ul>
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<b>Key performance indicators</b>	<p>I can make and use a simple winding mechanism that has an axle that turns and has a handle.</p> <p>I can use scissors safely to cut paper and thin card.</p> <p>I am beginning to understand how wheels and axles work.</p> <p>I can use reclaimed materials and construction skills.</p>	<p>I can use scissors to cut straight lines, corners and curves in felt, cotton, etc.</p> <p>I can use a template.</p> <p>I am beginning to use basic sewing techniques.</p>	<p>I understand the importance of hygiene when handling food - washing hands, hair tied back, wearing an apron.</p> <p>I can use scales to measure materials (with help)</p> <p>I can recognise the necessity of following an order in a recipe.</p>

**Year 3**  
**Progression in Design Technology Grid**

	Autumn	Spring	Summer
Topic	WONDERFUL WORLDS Structures Snow scene in a box	STONE AGE Food technology Food from the British Isles	ANCIENT EGYPT Textiles Giraffe bag
<b>Prior knowledge</b>	Have experience from KS1 of looking at materials for purpose. Have an awareness about the way a product is presented as well as how well it is built.	Know that food has to be farmed, grown or caught Name and sort foods into the five groups of the 'eat well' plate Understand where food comes from	Most children will have some experience of textiles from Y1 Kites unit.
<b>Prior skills</b>	Select from a range of tools and equipment explaining their choices. Follow procedures for safety. Use a range of components, including construction materials. Mark out, cut out and shape materials. Use simple fixing materials e.g. temporary - paper clips tape and permanent - glue, staples.	Use appropriate equipment to weigh and measure ingredients Prepare simple dishes safely and hygienically, without using a heat source Use techniques such as cutting, peeling and grating with support	Select from a range of materials Follow procedures for safety and hygiene Use and make own templates Use a range of components, including textiles, Measure, mark out, cut out and shape materials and components Assemble, join and combine materials and components Use finishing techniques, including those from art and design
<b>Vocabulary</b>	design, criteria, brief, innovative, aesthetics, appealing, joining, shaping, cutting, finishing, evaluate	balanced diet, fruit, vegetables, dairy, carbohydrates, proteins, vitamins, minerals, rearing, processing	prototypes, pattern, textile, properties, aesthetic, appealing, improvement
<b>Statutory requirements</b>	-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  -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.	-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 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
<b>Skills covered</b>	<b>Design</b>	<b>Cooking and Nutrition</b>	<b>Design</b>

	<p>Explain how particular parts of their products work. Share and clarify ideas through discussion.</p> <p><b>Make</b> Select tools and equipment suitable for the task Explain choices in relation to skills and techniques. Order main stages of making (English - instructions). Follow procedures for safety Measure, mark out, cut and shape materials with some accuracy.</p> <p><b>Evaluate</b> Identify the strengths and weaknesses of their ideas and products Consider the views of others, including intended users, to improve their work</p> <p><b>Technical knowledge</b> Know that materials have both functional properties and aesthetic qualities</p>	<p>Know that food is grown, reared and caught in the UK, Europe and the wider world. Know that a healthy diet is made up from a variety of different food and drink as depicted in the healthy plate. Know that to be active and healthy, food is needed to provide energy for the body. Measure and weigh ingredients appropriately using grams. Follow a recipe to prepare a simple dish with or without a heat source. Use techniques such as chopping, peeling and grating with growing independence.</p> <p><b>Technical knowledge</b> Know that food ingredients can be fresh, pre-cooked and processed</p>	<p>Indicate the design features of their products that will appeal to intended users Gather information about the needs and wants of individuals and groups Develop their own design criteria and use these to inform their ideas Make design decisions that take account of the availability of resources</p> <p><b>Make</b> Select materials and components suitable for the task Explain their choice of materials and components according to functional properties and aesthetic qualities Apply a range of finishing techniques, include those from art and design, with some accuracy</p> <p><b>Evaluate</b> Consider the views of others, including intended users, to improve their work Use their design criteria to evaluate their completed products</p> <p><b>Technical knowledge</b> Know that a single fabric shape can be used to make a 3D textiles product</p>
<b>Topic links</b>		<p>*History link - compare food from the UK now to food in Britain at the time of the Stone Age</p> <p>*Literacy link - topic writing - instructions for baking</p>	
<b>Identify great DT figures</b>		<p>British chef - Jamie Oliver Campaigning for healthy foods in school and using fresh, local produce</p>	<p>Local textile designer - Stephanie Cockburn Specialising in felting</p>
<b>Key performance indicators</b>	<p>I can explain, using DT vocabulary, my design and how it works.</p> <p>I can demonstrate the use of safe and effective techniques for measuring, marking out, cutting and shaping materials.</p> <p>I can show my product has been evaluated by discussing the strengths and weaknesses.</p>	<p>I can give an example of a food that is grown, a food that is caught and a food that is reared in the UK.</p> <p>I can recall the five areas on the healthy plate.</p> <p>I can measure and weigh ingredients in grams when following a simple recipe.</p>	<p>I can evidence how I developed my own design criteria after researching the needs of the intended user.</p> <p>I can show I am beginning to select materials for their function as well as considering the way they look.</p>

		I can show safe use of utensils when preparing food (e.g. peeling, grating or chopping).	I can use my own design criteria to evaluate my product.
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**Year 4**  
**Progression in Design Technology Grid**

	<b>Autumn</b>	<b>Spring</b>	<b>Summer</b>
<b>Topic</b>	<b>ROMANS</b> Food technology Roman Bread	<b>ANCIENT EGYPT</b> Mechanisms Shaduf water device	<b>RAINFORESTS</b> Structures Rainforest musical instrument
<b>Prior knowledge</b>	Know that food is grown, reared and caught in the UK, Europe and the wider world. Know that a healthy diet is made up from a variety of different food and drink as depicted in the healthy plate. Know that to be active and healthy, food is needed to provide energy for the body.	Awareness of leavers, sliders, wheels and axles from KS1. Awareness of components and joining methods.	Know that materials have both functional properties and aesthetic qualities. Understand how freestanding structures can be made stronger, stiffer and more stable.
<b>Prior skills</b>	Measure and weigh ingredients appropriately using grams. Follow a recipe to prepare a simple dish with or without a heat source. Use techniques such as chopping, peeling and grating with growing independence.	Select from a range of tools and equipment explaining their choices Follow procedures for safety Measure, mark out, cut out and shape materials and components Assemble, join and combine materials and components Use simple fixing materials e.g. Temporary - paper clips tape and permanent - glue, staples	Select tools and equipment suitable for the task Explain choices in relation to skills and techniques. Order main stages of making (English - instructions). Follow procedures for safety Measure, mark out, cut and shape materials with some accuracy. Use finishing techniques, including those from art and design
<b>Vocabulary</b>	Ingredients, recipe, utensils, units of measure, grams, scales, roll, shape, knead, dough, savoury, season, source, grown, reared, caught, processed	Shaduf, irrigation device, lifting, lever, bucket, weight, system, pulley, stages, construction, assemble, join, combine	Instrument, materials, aesthetics, functional properties, criteria, cross-sectional diagrams, research, tissue paper, glue, strengthen, stiffen, Cardboard, pins, rice, foil
<b>Statutory requirements</b>	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.	use research and develop design criteria to inform the design of innovative (historical), functional, appealing products that are fit for purpose, aimed at particular individuals or groups generate, develop, model and communicate their ideas through discussion and annotated sketches select from and use a wider range of materials and components, including construction materials according to their functional properties and aesthetic qualities understand how key events and individuals in design and technology have helped shape the world	generate, develop, model and communicate their ideas through discussion, annotated sketches and cross-sectional drawings 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 how to strengthen, stiffen and reinforce more complex structures

		understand and use mechanical systems in their products	
<b>Skills covered</b>	<p><b>Cooking and Nutrition</b></p> <ul style="list-style-type: none"> <li>-Know that food is grown, reared and caught in the UK, Europe and the wider world</li> <li>-Know that a healthy diet is made up from a variety of different food and drink as depicted in the healthy plate</li> </ul> <p>Give examples of foods that give the body types of energy and understand the effect of these of the body</p> <ul style="list-style-type: none"> <li>-Apply appropriate shaping techniques to food</li> <li>-Measure ingredients using scales</li> <li>-Prepare ingredients hygienically and using the appropriate utensils by following a recipe</li> <li>-Follow a recipe to prepare a dish that uses a read source</li> </ul> <p><b>Design</b></p> <ul style="list-style-type: none"> <li>-Gather information about the needs and wants of individuals and groups</li> </ul> <p>Evaluate</p> <ul style="list-style-type: none"> <li>- Identify the strengths and weaknesses of their ideas and products</li> <li>-Consider the views of others, including intended users, to improve their work</li> </ul>	<p><b>Design</b></p> <ul style="list-style-type: none"> <li>- Describe the purpose of their products</li> <li>-Explain how particular parts of their products work</li> <li>- Share and clarify ideas through discussion</li> <li>- Use annotated sketches to develop and communicate ideas</li> </ul> <p><b>Make</b></p> <ul style="list-style-type: none"> <li>- Select tools and equipment suitable for the task</li> <li>-Explain their choice of tools and equipment in relation to the skills and techniques they will be using</li> <li>-Select materials and components suitable for the task</li> <li>-Explain their choice of materials and components according to functional properties and aesthetic qualities</li> <li>-Order the main stages of making</li> <li>- Assemble, join and combine materials and components with some accuracy</li> </ul> <p><b>Evaluate</b></p> <p>Refer back to their design criteria as they design and make</p> <ul style="list-style-type: none"> <li>-Use their design criteria to evaluate their completed products</li> <li>-Identify the strengths and weaknesses of their ideas and products</li> </ul> <p><b>Technical Knowledge</b></p> <ul style="list-style-type: none"> <li>- Understand how levers and linkages or pneumatic systems create movement</li> </ul>	<p><b>Design</b></p> <ul style="list-style-type: none"> <li>-Develop their own design criteria and use these to inform their ideas</li> <li>-Research designs</li> <li>-Generate realistic ideas, focusing on the needs of the user</li> <li>-Make design decisions that take account of the availability of resources</li> </ul> <p><b>Make</b></p> <ul style="list-style-type: none"> <li>-Select tools and equipment suitable for the task</li> <li>-Apply a range of finishing techniques, include those from art and design, with some accuracy</li> </ul> <p><b>Technical Knowledge</b></p> <ul style="list-style-type: none"> <li>-Know that materials have both functional properties and aesthetic qualities</li> <li>-Know that materials can be combined and mixed to create more useful characteristics</li> </ul>

<b>Key performance indicators</b>	I can provide examples of food that give the body types of energy.  I can apply appropriate shaping techniques to food  I can prepare ingredients hygienically and using appropriate utensils by following a recipe	I can describe the purpose of my product and explain how certain parts work.  I can refer back to my design criteria as I design and make.  I can understand how lever systems create movement.	I can make design decisions that take account of the availability of resources.  I can apply a range of finishing techniques to my product.  I can discuss the functional and aesthetic qualities.
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**Year 5**  
**Progression in Design Technology Grid**

	Autumn	Spring	Summer
Topic	<b>WW2</b> <b>Structures</b> <b>A shelter for WW2 Refugees</b>	<b>ANGLO SAXONS AND VIKINGS</b> <b>Structures</b> <b>Design and make a Viking boat/shields</b>	<b>WHERE ON EARTH?</b> <b>Food technology</b> <b>World Foods</b>
Prior knowledge	Know that materials have both functional properties and aesthetic qualities Know that materials can be combined and mixed to create more useful characteristics	Know that materials have both functional properties and aesthetic qualities Know that materials can be combined and mixed to create more useful characteristics	Know that food is grown, reared and caught in the UK, Europe and the wider world Know that a healthy diet is made up from a variety of different food and drink as depicted in the healthy plate Give examples of foods that give the body types of energy and understand the effect of these of the body
Prior skills	Develop their own design criteria and use these to inform their ideas Research designs Generate realistic ideas, focusing on the needs of the user Make design decisions that take account of the availability of resources Select tools and equipment suitable for the task Apply a range of finishing techniques, include those from art and design, with some accuracy	Develop their own design criteria and use these to inform their ideas Research designs Generate realistic ideas, focusing on the needs of the user Make design decisions that take account of the availability of resources Select tools and equipment suitable for the task Apply a range of finishing techniques, include those from art and design, with some accuracy	Apply appropriate shaping techniques to food Measure ingredients using scales Prepare ingredients hygienically and using the appropriate utensils by following a recipe Follow a recipe to prepare a dish that uses a real source
Vocabulary	design, criteria, brief, innovative, aesthetics, appealing, joining, shaping, cutting, finishing, evaluate research, design, criteria, functional, purpose, shaping, reinforcement, structures	design, criteria, brief, innovative, aesthetics, appealing, joining, shaping, cutting, finishing, evaluate research, design, criteria, functional, purpose, shaping, reinforcement, float, buoyancy, streamline, stability	balanced diet, fruit, vegetables, dairy, carbohydrates, proteins, vitamins, minerals, rearing, processing, fair-trade, dice, simmer, boil, bake, preheat,
Statutory requirements	Generate, develop, model and communicate their ideas through discussion, annotated sketches and cross-sectional diagrams Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. Evaluate	Use research and develop design criteria to inform the design of an innovative, functional product that is fit for purpose, aimed at particular individuals or groups Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional diagrams, prototypes and pattern pieces.	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>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> <p>Technical knowledge</p> <p>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</p>	<p>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately and select from and use a wider range of materials and components, according to their functional properties and aesthetic qualities.</p> <p>Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</p> <p>Technical knowledge</p> <p>Apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</p>	
<b>Skills covered</b>	<p><b>Design</b></p> <p>Describe the purpose of their products</p> <p><b>Design</b></p> <p>Indicate the design features of their products that will appeal to intended users</p> <p>Explain how particular parts of their products work</p> <p>Carry out research, using interviews and web-based resources</p> <p>Identify the needs, wants, preferences and values of individuals and groups</p> <p>Develop a simple design specification to guide their thinking</p> <p>Share and clarify ideas through discussion</p> <p>Use annotated sketches and cross-sectional drawings to develop and communicate ideas</p> <p><b>Make</b></p> <p>Select tools and equipment suitable for the task</p> <p><b>Evaluate</b></p> <p>Identify the strengths and weaknesses of their ideas and products</p> <p>Compare and evaluate their ideas and products to their original design specification</p> <p><b>Technical knowledge</b></p> <p>Know how to reinforce/strengthen a 3D framework</p>	<p><b>Design</b></p> <p>Describe the purpose of their products</p> <p>Indicate the design features of their products that will appeal to intended users</p> <p>Explain how particular parts of their products work</p> <p>Carry out research, using web-based resources</p> <p>Identify the needs, wants, preferences and values of individuals and groups</p> <p>Develop a simple design specification to guide their thinking</p> <p>Share and clarify ideas through discussion</p> <p>Model ideas using prototypes and pattern pieces</p> <p>Use annotated sketches and cross-sectional drawings to develop and communicate ideas</p> <p><b>Make</b></p> <p><b>Evaluate</b></p> <p><b>Technical knowledge</b></p>	<p><b>Cooking and Nutrition</b></p> <p>Know that seasons may affect the food available</p> <p>Understand the importance of correct storage and handling of ingredients</p> <p>Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques</p> <p>Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.</p> <p>Assemble or cook ingredients controlling the temperature of the oven or hob if cooking</p> <p>Measure accurately using different equipment</p> <p>Create recipes including ingredients, methods, cooking times and temperatures-</p> <p>Know that recipes can be adapted to change the appearance, taste, texture and aroma</p> <p><b>Technical knowledge</b></p> <p>Know that a recipe can be adapted a by adding or substituting one or more ingredients</p>

<p><b>Key performance indicators</b></p>	<p>I can explain, using DT vocabulary, my design.</p> <p>I can demonstrate the use of safe and effective techniques for measuring, marking out, cutting and shaping materials.</p> <p>I can show a range of ideas (using sketching and annotated design) to create a product that serves a purpose for the user.</p> <p>I can evidence how I developed my own design criteria after researching the needs of the intended user.</p> <p>I can explain how I made my structure strong and the techniques I used.</p>	<p>I can explain the qualities of the new materials I have used during this project.</p> <p>I can show I am beginning to select materials for their function as well as considering the way they look.</p> <p>I can use my own design criteria to evaluate my product.</p> <p>I can show my product has been evaluated by discussing the strengths and weaknesses.</p>	<p>I recognise foods grown in different countries including those grown as part of fair-trade agreements.</p> <p>I can accurately measure and weigh ingredients in grams when following a recipe.</p> <p>I can show safe use of utensils when preparing food (e.g. peeling, grating or chopping).</p> <p>I can adapt recipes to change appearance, taste, texture and aroma.</p>
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**Year 6  
Progression in Design Technology Grid**

	Autumn	Spring	Summer
Topic	IS IT EVER RIGHT TO FIGHT? (WW2) Mechanisms Dragon's Den Project	HAVE WE ALWAYS LOOKED THIS WAY? Structures Mayan Masks	CAN WE CHANGE THE WORLD? Food Technology Recipe
<b>Prior knowledge</b>	Understand how levers and linkages or pneumatic systems create movement Describe the purpose of their products Explain how particular parts of their products work Explain their choice of tools and equipment in relation to the skills and techniques they will be using Explain their choice of materials and components according to functional properties and aesthetic qualities	Describe the purpose of their products Develop a simple design specification to guide their thinking Explain how particular parts of their products work	Know that seasons may affect the food available Understand the importance of correct storage and handling of ingredients Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed. Know that recipes can be adapted to change the appearance, taste, texture and aroma Know that a recipe can be adapted a by adding or substituting one or more ingredients
<b>Prior skills</b>	Share and clarify ideas through discussion Use annotated sketches to develop and communicate ideas Select tools and equipment suitable for the task Select materials and components suitable for the task Order the main stages of making Assemble, join and combine materials and components with some accuracy Refer back to their design criteria as they design and make Use their design criteria to evaluate their completed products Identify the strengths and weaknesses of their ideas and products	Carry out research, using web-based resources Indicate the design features of their products that will appeal to intended users Identify the needs, wants, preferences and values of individuals and groups Share and clarify ideas through discussion Model ideas using prototypes and pattern pieces Use annotated sketches and cross-sectional drawings to develop and communicate ideas	Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques Assemble or cook ingredients controlling the temperature of the oven or hob if cooking Measure accurately using different equipment Create recipes including ingredients, methods, cooking times and temperatures
<b>Vocabulary</b>	Exploded diagram Prototype Aesthetic Design criteria Reinforce	Mosaic Intricate Obsidian (volcanic rock used in making masks) Adorn Ceremony	Seasonal Savoury Reared Processed Substitution
<b>Statutory requirements</b>	Use research and develop design criteria to inform the design of innovative, functional, appealing	Use research and develop design criteria to inform the design	Use research and develop design criteria to inform the design of innovative, functional, appealing

	<p>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>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, 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 apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p>	<p>Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work Apply their understanding of how to strengthen, stiffen and reinforce more complex structures</p>	<p>products that are fit for purpose, aimed at particular individuals or groups Generate, develop, model and communicate their ideas through discussion, 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</p>
<p><b>Skills covered</b></p>	<p><b>Design</b> Develop a simple design specification to guide their thinking Describe the purpose of their products Indicate the design features of their products that will appeal to intended users Share and clarify ideas through discussion Model using prototypes Use exploded diagrams <b>Make</b> Produce detailed lists of tools, equipment and materials Formulate step-by-step plans Accurately assemble, join and combine materials <b>Evaluate</b> How innovative products are Compare and evaluate their ideas and products to their original design specification <b>Technical knowledge</b> Understand how complex electrical circuits and components can be used to create functional products</p>	<p><b>Design</b> Carry out research using web-based resources Describe the purpose of their products Use annotated sketches <b>Make</b> Produce a detailed list of equipment Accurately assemble, join and combine materials Accurately apply a range of finishing techniques Know how to reinforce/ strengthen a 3D framework <b>Evaluate</b> Analyse existing products Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make <b>Technical knowledge</b></p>	<p><b>Design</b> Make decisions, taking account of constraints such as time, resources and cost Generate innovative ideas Produce a detailed list of equipment Accurately measure (using scales) Investigate how much products cost to make Know that a recipe can be adapted by adding or substituting ingredients Combine ingredients appropriately Know how to use a range of techniques Create and refine recipes</p>

<b>Key performance indicators</b>	I can develop a simple design to guide my thinking I can use an exploded diagram to clarify how my product will be assembled I can create a list of tools, equipment and materials	I can carry out research using web-based resources to establish what a Mayan mask would have looked like. I can create an annotated sketch for my own design I can accurately assemble, join and combine materials	I can create a recipe for a cake and identify the equipment I will require I can accurately measure using scales
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