



# Subject: Design and Technology

## RATIONALE FOR OUR DT CURRICULLUM AT WHITE MEADOWS:

For White Meadows' pupils, Design and Technology aims to inspire the interest of how the world works. DT teaches pupils to; develop the creative, technical and practical skills needed to perform everyday tasks confidently and at White Meadows we want to ensure we are building on the skills taught in previous years in order to have practical, independent competence. For some of our children who find academic learning a challenge, giving them the opportunity to shine in the practical side of DT can increase their confidence and self-esteem. It also aims to build and apply a repertoire of knowledge, understanding and skills in order to design and make high-quality products for a wide range of users. It includes reviewing, evaluating and testing their ideas and products and the work of others. Within the planning each year group has relevant key vocabulary to learn and use: this progression consolidates the previous year's understanding, whilst adding new technical words to the pupils' vocabulary.

White Meadows wish to expose children to a healthy way of eating and with childhood obesity being a current topic we need to give our children the ability to make healthier choices and a sound knowledge of food and cooking. As part of their work with food, pupils will be taught how to cook and apply the principles of nutrition and healthy eating. Using our fully equipped and functional kitchen, we give our children somewhere to examine and taste new and exotic ingredients, plan exciting menus, learn cooking skills, use new utensils, and market and sell food. 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.

Design and Technology is often closely linked with our topics which inspire the children to learn their new skills so is covered throughout the year. We aim to ensure that our curriculum is accessible to all children; SEND, EAL and Gifted and Talented. The practical elements of this subject especially allow our kinaesthetic learners the opportunity to excel by encouraging children to be hands on with each stage of their learning. This approach removes the pressure of those struggling academically and gives them the chance to shine.

Year Group	Knowledge		Skills <i>*See non-negotiable 'sticky knowledge' focus in green</i>		Vocabulary		Club/Visit/Expert	
	DT	Cooking/Nutrition	DT	Cooking/Nutrition	DT	Cooking/Nutrition	DT	Cooking/Nutrition
Early Years - Nursery	<p><b>2-3 years</b></p> <ul style="list-style-type: none"> <li>Start to make marks intentionally. Express ideas and feelings through making marks, and sometimes give a meaning to the marks they make. Explore different materials, using all their senses to investigate them. Manipulate and play with different materials.</li> <li>Make simple models which express their ideas.</li> <li>Notice patterns with strong contrasts and be attracted by patterns resembling the human face.</li> <li>Use their imagination as they consider what they can do with different materials.</li> </ul> <p><b>3-4</b></p> <ul style="list-style-type: none"> <li>Explore different materials freely, in order to develop their ideas about how to use them and what to make.</li> <li>Develop their own ideas and then decide which materials to use to express them.</li> <li>Join different materials and explore different textures.</li> </ul>		<p><b>2-3 years</b></p> <ul style="list-style-type: none"> <li>Begin to explore different materials.</li> <li>Begin to make intentional marks.</li> <li>Express their own ideas and feelings through mark making.</li> </ul> <p><b>3-4 years</b></p> <ul style="list-style-type: none"> <li>Select material with more purpose.</li> <li>Begin to make marks which can be interpreted by an adult.</li> <li>Whilst exploring materials, begin to join them using different methods.</li> </ul>		Push Pull Cut Snip Scissors Explore Thread	Cut Food Healthy Unhealthy Mix Spread	Funky Fingers Messy Monsters	

	<ul style="list-style-type: none"> <li>• Create closed shapes with continuous lines, and begin to use these shapes to represent objects.</li> <li>• Draw with increasing complexity and detail, such as representing a face with a circle and including details. Use drawing to represent ideas like movement or loud noises.</li> <li>• Show different emotions in their drawings and paintings, like happiness, sadness, fear etc. Explore colour and colour-mixing. Show different emotions in their drawings - happiness, sadness, fear etc</li> </ul>							
<b>Early Years - Reception</b>	<p><b>4-5</b></p> <ul style="list-style-type: none"> <li>• Explore, use and refine a variety of artistic effects to express their ideas and feelings.</li> <li>• Return to and build on their previous learning, refining ideas and developing their ability to represent them.</li> <li>• Create collaboratively sharing ideas, resources and skills</li> </ul> <p><b>ELG</b></p> <ul style="list-style-type: none"> <li>• Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</li> <li>• Share their creations, explaining the process they have used.</li> </ul>	<p><b>ELG</b></p> <p>Manage their own basic hygiene and personal needs, including dressing, going to the toilet and understanding the importance of healthy food choices.</p>	<p><b>4-5 years</b></p> <ul style="list-style-type: none"> <li>• Begin working with others to share ideas, resources and skills.</li> <li>• Add more detail to the marks that they make to communicate ideas.</li> </ul> <p><b>ELG</b></p> <ul style="list-style-type: none"> <li>• Begin to manipulate different tools.</li> <li>• Talk through their ideas with another person.</li> </ul>	<p><b>ELG</b></p> <p>Begin to identify healthy and unhealthy foods.</p>	<p>Push Pull Cut Snip Tools Scissors Explore Thread</p>	<p>Cut Food Healthy Unhealthy Mix Spread</p>	<p>Funky Fingers Messy Monsters</p>	<p>Chartwell visit Oral B/Dentist</p>
<b>Year 1</b>	<p><b>Design</b></p> <ul style="list-style-type: none"> <li>• In a group design purposeful, functional, appealing products for themselves based on given design criteria.</li> <li>• Communicate their ideas through talking and drawing.</li> </ul> <p><b>Make</b></p> <ul style="list-style-type: none"> <li>• With support use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining]</li> <li>• With support use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</li> </ul> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>• Begin to explore and evaluate a range of given existing products</li> <li>• Evaluate their ideas and products against given design criteria</li> </ul> <p><b>Technical knowledge</b></p>	<ul style="list-style-type: none"> <li>• Use the basic principles of a healthy and varied diet to prepare dishes; <ul style="list-style-type: none"> <li>○ Pupils will develop their knowledge of basic healthy eating messages.</li> <li>○ Pupils will carry out research to help them design a dish.</li> <li>○ Pupils will develop the skills to safely use a range of basic cooking equipment (e.g. knife, chopping board, spoon, fork, bowl).</li> <li>○ Pupils will design, make and evaluate their dish.</li> </ul> </li> </ul>	<ol style="list-style-type: none"> <li>1. Begin to develop their ideas through talk and drawings. Make templates and mock ups of their ideas on paper.</li> <li>2. Begin to select and name the tools needed to work the materials e.g. scissors for paper.</li> <li>3. Begin to understand the development of existing products: What they are for and how they work.</li> <li>4. With support start to suggest ideas and explain what they are going to do.</li> <li>5. Begin to select tools and materials; sometimes using the correct vocabulary to name them.</li> <li>6. Support the children in understanding the purpose for their product and why they need to design it first.</li> </ol>	<ol style="list-style-type: none"> <li>1. Children to be able to name and use a range of basic cooking and food preparation skills safely and hygienically with support. <ul style="list-style-type: none"> <li>○ Peel (with a peeler)</li> <li>○ Mix (with increasing thoroughness)</li> <li>○ Spread (soft ingredients)</li> <li>○ Measure (with measuring spoons)</li> <li>○ Snip with kitchen scissors</li> <li>○ Grate (soft foods like cheese)</li> <li>○ Shape</li> <li>○ Crush (soft fruit with a potato masher)</li> <li>○ Juice (juicer)</li> <li>○ Cut out with cutters</li> <li>○ Spoon ingredients (in to different containers)</li> <li>○ Arrange</li> </ul> </li> </ol>	<p>Templates Mock ups Tools Scissors Materials Design Join Peel Mix Spread Measure Snip Grate Shape Crush Juice Arrange Thread Sift Explore Evaluate</p>			

	<ul style="list-style-type: none"> <li>Build structures and begin to explore how they could be made stronger.</li> <li>Begin to explore and use mechanisms [for example, wheels], in their products.</li> </ul>		<p>7. Start to assemble, join and combine materials in order to make a product.</p>	<ul style="list-style-type: none"> <li>Thread (soft foods onto a cocktail stick, e.g. strawberries, satsuma segments)</li> <li>Sift (flour into a bowl)</li> <li>Cut (soft foods* with a table knife progressing to firmer foods with a vegetable knife) using:</li> <li>Claw grip/bridge hold/fork secure</li> </ul> <p>2. Identify the different food groups.</p> <p>3. Begin to understand which foods are healthy. Recall and carryout the getting ready to cook steps, with support.</p>			
<p><b>Year 2</b></p>	<p><b>Design</b></p> <ul style="list-style-type: none"> <li>Individually design purposeful, functional, appealing products for themselves and other users based on design criteria.</li> <li>Generate, develop, model and communicate their ideas through talking, drawing, templates and, where appropriate, information and communication technology.</li> </ul> <p><b>Make</b></p> <ul style="list-style-type: none"> <li>Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</li> <li>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</li> </ul> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>Explore and evaluate a range of existing products</li> <li>Evaluate their ideas and products against their design criteria</li> </ul> <p><b>Technical knowledge</b></p> <ul style="list-style-type: none"> <li>Build structures, exploring how they could be made stronger, stiffer and more stable.</li> </ul> <p>Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</p>	<ul style="list-style-type: none"> <li>Use the basic principles of a healthy and varied diet to prepare dishes; <ul style="list-style-type: none"> <li>Pupils will get ready to cook and prepare ingredients safety and hygienically.</li> <li>Pupils will make and evaluate their dish.</li> </ul> </li> <li>Understand where food comes from; <ul style="list-style-type: none"> <li>Pupils will develop knowledge about healthy eating and where food comes from.</li> <li>Pupils will be aware that others may have different dietary needs so dishes may need to be modified.</li> </ul> </li> </ul>	<ol style="list-style-type: none"> <li>Begin to draw on their own experience to help generate ideas and research conducted on criteria.</li> <li>Begin to develop their ideas through talk and drawings. Make templates and mock ups of their ideas in card and paper or using ICT.</li> <li>Select and name the tools needed to work the materials e.g. scissors for paper</li> <li>Begin to understand the development of existing products: What they are for, how they work, materials used.</li> <li>Start to suggest ideas and explain what they are going to do.</li> <li>Begin to select tools and materials; use correct vocabulary to name and describe them.</li> <li>Understand how to identify a target group for what they intend to design and make based on a design criteria.</li> <li>Identify a purpose for what they intend to design and make. With increasing independence start to assemble, join and combine materials in order to make a product.</li> </ol>	<ol style="list-style-type: none"> <li>Children to be able to name and use a range of basic cooking skills with support. Describe the skills used.</li> <li>Get ready to cook, with some support (e.g. tying of apron).</li> <li>Perform basic cooking skills as instructed (e.g. cutting out, snipping, mixing, spooning, spreading).</li> <li>Suggest ways to adapt a dish to make it suitable for the needs of others (e.g. allergies, religion, culture, choice).</li> <li>Plan a dish with consideration for the needs of others (e.g. a vegetarian).</li> <li>Demonstrate the safe use of some basic cooking equipment (e.g. cutters, kitchen scissors).</li> <li>Make a simple dish, safely and hygienically.</li> <li>Begin to understand that all food groups are necessary and why.</li> </ol>	<p>Criteria Templates Mock ups Tools Materials Name tools used Name materials used Design Assemble Claw grip, bridge hold, fork secure Peel Mix Spread Measure Snip Grate Shape Arrange Thread</p>	<p>All Sorts (involves cooking, painting, drawing, junk modelling).</p>	<p>Cooking club Chartwells</p>

<p><b>Year 3</b></p>	<p><b>Design</b></p> <ul style="list-style-type: none"> <li>○ introduce children to research, design and function, producing products that are fit for purpose.</li> <li>○ develop, model and communicate their ideas through discussion and drawing</li> </ul> <p><b>Make</b></p> <ul style="list-style-type: none"> <li>○ select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], with assistance, including construction materials, textiles and ingredients,</li> </ul> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>○ investigate and analyse a range of existing products, evaluate.</li> <li>○ be shown how key events and individuals in design and technology have helped shape the world</li> </ul> <p><b>Technical knowledge</b></p> <ul style="list-style-type: none"> <li>○ broaden their understanding of how to strengthen, stiffen and reinforce structures, understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> </ul>	<ul style="list-style-type: none"> <li>• Understand and apply the principles of a healthy and varied diet. <ul style="list-style-type: none"> <li>○ Pupils will learn about the role of bread, and meals which include bread, in a healthy, varied diet.</li> </ul> </li> <li>• Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</li> <li>• Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</li> </ul>	<ul style="list-style-type: none"> <li>• Start to work safely and accurately with a range of simple tools.</li> <li>• Understand how well products have been designed, made, what materials have been used and the construction technique.</li> <li>• Learn about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products.</li> </ul> <p>With growing confidence generate ideas for an item, considering its purpose and the user/s.</p>	<ol style="list-style-type: none"> <li>1. I know that what people around the world eat depends on reasons such as availability, preference, resources, time, culture and religion and food may look different but is usually includes combinations of foods from the same the Eatwell Guide groups.</li> <li>2. I know that the word 'diet' means the amount and range of food eaten and that a variety and balance of food and drink is needed to make a healthy diet and that 6 - 8 drinks a day is important.</li> <li>3. I can recognise and name an increasing range of ingredients and know where to find ingredients in a shop. I can discuss how to grow food.</li> <li>4. I am willing to taste different ingredients and can describe them using sensory vocabulary.</li> <li>5. I can name and use an increasing range of cooking equipment and explain what it does and get myself ready to cook. I can make a dish with supervision and eat sociably with others.</li> <li>6. I know that there are storage instructions on most food packaging and I can identify and use these, food should be stored correctly, to prevent cross contamination and decay.</li> <li>7. I know that if I am making food for other people I need to think about their needs and to recycle packaging and compost.</li> <li>8. I can give examples of foods from different animals and plants, discuss how these animals and plants are farmed or grown at home and food is grown in seasons.</li> </ol>	<p>Research</p> <p>Design criteria</p> <p>Innovative</p> <p>Functional</p> <p>Name a range of tools used for project</p> <p>Investigate</p> <p>Evaluate</p> <p>Technology</p> <p>Strengthen</p> <p>Stiffen</p> <p>Reinforce</p> <p>Structure</p> <p>Computer components</p> <p>Knead</p> <p>Shape</p> <p>Mechanical - gears, pulleys, cams, levers and linkages</p> <p>Electrical - series circuits incorporating switches, bulbs, buzzers and motors</p>	<p>All Sorts (involves cooking, painting, drawing, junk modelling).</p>	<p>Cooking club</p> <p>Chartwells</p>
<p><b>Year 4</b></p>	<p><b>Design</b></p> <ul style="list-style-type: none"> <li>○ children with assistance begin to use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose.</li> </ul>	<ul style="list-style-type: none"> <li>• Understand and apply the principles of a healthy and varied diet. <ul style="list-style-type: none"> <li>○ Pupils will develop and apply their</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• Start to generate ideas, considering the purposes for which they are designing- link with Mathematics and Science.</li> </ul>	<ol style="list-style-type: none"> <li>1. Know that we need to eat foods in the proportions shown by the Eatwell Guide to have a healthy diet; identify and classify ingredients in composite dishes according to</li> </ol>	<p>Criteria</p> <p>Templates</p> <p>Mock ups</p> <p>Tools</p> <p>Materials</p> <p>Name tools used</p>	<p>All Sorts (involves cooking, painting, drawing, junk modelling).</p>	<p>Cooking club</p> <p>Chartwells</p>

	<ul style="list-style-type: none"> <li>○ generate, develop, model and communicate their ideas through discussion, annotated sketches, pattern pieces and computer-aided design.</li> </ul> <p><b>Make</b></p> <ul style="list-style-type: none"> <li>○ select from and use a wide range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] beginning to become more accurate</li> <li>○ with increasing independence 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</li> </ul> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>○ investigate and analyse a range of existing products</li> <li>○ evaluate their ideas and products against their own design criteria and begin to consider the views of others to improve their work</li> <li>○ begin to understand how key events and individuals in design and technology have helped shape the world</li> </ul> <p><b>Technical knowledge</b></p> <ul style="list-style-type: none"> <li>○ begin to apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>○ at appropriate level understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> <li>○ begin to show an understanding of computing to program, monitor and control their products.</li> </ul>	<p>knowledge and understanding of ingredients and healthy eating.</p> <ul style="list-style-type: none"> <li>• Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. <ul style="list-style-type: none"> <li>○ Pupils will learn and practice food preparation and cooking skills.</li> <li>○ Pupils will design and create dishes for their intended user based on their research.</li> <li>○ Pupils will make and evaluate their dish</li> </ul> </li> <li>• Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</li> </ul>	<ul style="list-style-type: none"> <li>• 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.</li> <li>• Know how to measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques.</li> <li>• Start to join and combine materials and components accurately in temporary and permanent ways.</li> <li>• Evaluate their products carrying out appropriate tests.</li> <li>• Evaluate the key designs of individuals in design and technology has helped shape the world.</li> </ul>	<p>the Eatwell Guide food groups, use the Eatwell Guide model to help me make healthy choices and plan healthy meals and menus. I can name the sources of common ingredients found in different dishes and meals.</p> <ol style="list-style-type: none"> <li>2. I can recognise and name an increasing range of ingredients, explain where to find different ingredients in a shop and discuss how to grow food.</li> <li>3. I can give examples of how ingredients need to be prepared before they are eaten, be willing to taste different ingredients and can describe them using sensory vocabulary.</li> <li>4. I can name and use an increasing range of cooking equipment and cooking skills and get myself ready to cook.</li> <li>5. I know that there are storage instructions on most food packaging and I can identify and use these and that food should be stored in different to prevent cross contamination, spoil and decay.</li> <li>6. I know that if I am making food for other people I need to think about their needs and be aware of waste.</li> <li>7. I can make a dish with supervision and eat sociably with others.</li> <li>8. I can give examples of foods from different animals and plants, how they are farmed or grown at home. I can name foods produced in the UK.</li> <li>9. I can give examples of foods which grow in different places due to climate and conditions.</li> <li>10. I can give examples of how foods from animals are processed to make them safe to eat, how food is processed at home or in factories.</li> </ol>	<p>Name materials used</p> <p>Techniques used - cutting, shaping, joining, finishing</p> <p>Spreading</p> <p>Slicing</p> <p>Arranging</p> <p>Mechanical - gears, pulleys, cams, levers and linkages</p> <p>Electrical - series circuits incorporating switches, bulbs, buzzers and motors</p> <p>Computer components</p>		
<p><b>Year 5</b></p>	<p><b>Design</b></p> <ul style="list-style-type: none"> <li>○ use research and develop design criteria to inform the design of</li> </ul>	<ul style="list-style-type: none"> <li>• Understand and apply the principles of a</li> </ul>	<ul style="list-style-type: none"> <li>• Begin to use research and develop design criteria to inform the design of</li> </ul>	<ol style="list-style-type: none"> <li>1. I know that different types of food provide different amounts of energy, which is</li> </ol>	<p>Criteria</p> <p>Templates</p> <p>Mock ups</p>	<p>All Sorts (involves cooking,</p>	<p>Cooking club</p> <p>Chartwells</p>

	<p>innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups</p> <ul style="list-style-type: none"> <li>○ generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> </ul> <p><b>Make</b></p> <p>form practical tasks [for example, cutting, components, including construction properties and aesthetic qualities</p> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>○ investigate and analyse a range of existing products</li> <li>○ evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> <li>○ understand how key events and individuals in design and technology have helped shape the world</li> </ul> <p><b>Technical knowledge</b></p> <ul style="list-style-type: none"> <li>○ with increasing independence apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>○ understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> <li>○ understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</li> <li>○ apply their understanding of computing to program, monitor and control their products.</li> </ul>	<p>healthy and varied diet.</p> <ul style="list-style-type: none"> <li>• Pupils will use acquired healthy eating knowledge to design and make a salad which contributes to a healthy, varied diet.</li> <li>• Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</li> <li>• Pupils will develop and practise their food skills by preparing ingredients safely and hygienically.</li> <li>• Pupils will design and make a salad for their intended user based on their experiences and research.</li> <li>• Pupils will make and evaluate their salad.</li> <li>• Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</li> <li>• Pupils will explore a variety of salads and salad ingredients associated with different countries around the world.</li> </ul>	<p>innovative, functional, appealing products that are fit for purpose.</p> <ul style="list-style-type: none"> <li>• Evaluate the key designs of individuals in design and technology has helped shape the world.</li> <li>• Begin to evaluate it personally and seek evaluation from others.</li> <li>• Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT.</li> <li>• Understand that mechanical and electrical systems have an input, process and output. Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT.</li> </ul>	<p>measured in kilojoules (metric) and kilocalories (imperial) and be aware of portion size and our bodies need different amounts of energy for different activities.</p> <ol style="list-style-type: none"> <li>2. I know that there are a vast range of ingredients used around the world and I can name some of these, that ingredients are prepared differently depending on culture, country, custom and religion.</li> <li>3. I try ingredients purposefully to determine which is most appropriate for the dish I am making, using descriptive sensory vocabulary.</li> <li>4. I can name and select an extended range of cooking equipment and skills which I may not have used before and explain its function and how it is designed for its purpose.</li> <li>5. I know that there are date marks ('use by' and 'best before') on foods and I can identify and use these, I know that different food should be stored in different places in the fridge and be covered to keep it at its best and prevent cross contamination spoil and decay due to the action of micro-organisms, insects and other pests.</li> <li>6. I can modify a recipe to: - make it healthier based on The eatwell plate and by suggesting healthier cooking techniques; - make it suitable for different people; - make it suitable for different occasions.</li> <li>7. I can follow a recipe and make a dish with some guidance.</li> <li>8. I can give examples of foods from different animals and plants, how they are farmed or grown at home. I can name foods produced in the UK.</li> <li>9. I can give examples of foods which grow in different places due to climate and conditions.</li> </ol>	<p>Evaluate</p> <p>Tools</p> <p>Materials</p> <p>Input, process and output</p> <p>Needle</p> <p>Sewing</p> <p>Design criteria</p> <p>Running stitch</p> <p>Back stitch</p> <p>Cotton, thread</p> <p>Techniques used - cutting, shaping, joining, finishing</p> <p>Mechanical - gears, pulleys, cams, levers and linkages</p> <p>Electrical - series circuits incorporating switches, bulbs, buzzers and motors</p> <p>Computer components</p> <p>Potatoes, bread, rice, pasta and other starchy carbohydrates</p> <p>bridge hold, claw grip and grating</p> <p>sensory vocabulary to describe a selection of foods</p> <p>Mechanical - gears, pulleys, cams, levers and linkages</p> <p>Electrical - series circuits incorporating switches, bulbs, buzzers and motors</p> <p>Computer components</p>	<p>painting, drawing, junk modelling).</p>	
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				10. I can give examples of how foods from animals are processed to make them safe to eat, how food is processed at home or in factories.			
<b>Year 6</b>	<p><b>Design</b></p> <ul style="list-style-type: none"> <li>to 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, master techniques</li> <li>begin to master generating, developing, modelling and communicating their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</li> </ul> <p><b>Make</b></p> <ul style="list-style-type: none"> <li>begin to master selecting from and using a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately</li> <li>begin to master selecting from and using a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</li> </ul> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>investigate and analyse a range of existing products</li> <li>evaluate their ideas and products against their own design criteria and consider the views of others to improve their work</li> <li>understand how key events and individuals in design and technology have helped shape the world</li> </ul> <p><b>Technical knowledge</b></p> <ul style="list-style-type: none"> <li>apply their understanding of how to strengthen, stiffen and reinforce more complex structures</li> <li>understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</li> <li>understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</li> </ul>	<ul style="list-style-type: none"> <li>Understand and apply the principles of a healthy and varied diet.</li> <li>Pupils will learn about nutrients, water and fibre and their role in a healthy, varied diet.</li> <li>Pupils will investigate products and undertake research to generate ideas for their own product.</li> <li>Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques.</li> <li>Pupils will design and make dishes safely and hygienically for the intended user based on design criteria.</li> <li>Pupils will evaluate their product.</li> <li>Pupils will design suitable packaging for their product.</li> </ul> <p>Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p>	<ul style="list-style-type: none"> <li>Draw up a specification for their design- link with Mathematics and Science</li> <li>Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose.</li> <li>Evaluate against their original criteria and suggest ways that their product could be improved.</li> <li>Evaluate the key designs of individuals in design and technology has helped shape the world.</li> <li>Know how more complex electrical circuits and components can be used to create functional products and how to program a computer to monitor changes in the environment and</li> <li>Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment including ICT.</li> </ul>	<ol style="list-style-type: none"> <li>I understand that I need the nutrients - carbohydrate, protein, fat, vitamins and minerals - as well as fibre and water to be healthy, and these are acquired by eating a variety of foods. (fibre which is not digested but helps to keep the digestive system healthy.)</li> <li>I know that energy is provided by the nutrients carbohydrate, protein and fat and that all food and drink provide nutrients and I can explain the basic function of each nutrient and I can identify and interpret the nutrition panel on food packaging and use it to help me make food choices</li> <li>I can give examples of foods from different animals and plants, how they are farmed or grown at home. I can name foods produced in the UK.</li> <li>I can give examples of foods which grow in different places due to climate and conditions.</li> <li>I can give examples of how foods from animals are processed to make them safe to eat, how food is processed at home or in factories.</li> <li>I try ingredients purposefully to determine which is most appropriate for the dish I am making, using descriptive sensory vocabulary.</li> <li>I can follow a recipe and make a dish with some guidance.</li> <li>I can name and use an extended range of cooking equipment which I may not have used before and explain its function and how it is designed for its purpose.</li> <li>I know that there are date marks ('use by' and 'best</li> </ol>	<p>Criteria</p> <p>Templates</p> <p>Mock ups</p> <p>Evaluate</p> <p>Tools</p> <p>Materials</p> <p>annotated sketches</p> <p>cross-sectional and exploded diagrams</p> <p>prototypes</p> <p>pattern pieces</p> <p>computer-aided design</p> <p>Vocab related to materials and components, construction materials, textiles and ingredients</p> <p>Peel</p> <p>Grate</p> <p>cut using the bridge hold and fork secure/claw grip</p> <p>discuss ingredients using sensory vocabulary</p> <p>key label information</p> <p>Mechanical - gears, pulleys, cams, levers and linkages</p> <p>Electrical - series circuits incorporating switches, bulbs, buzzers and motors</p> <p>Computer components</p>	<p>All Sorts (involves cooking, painting, drawing, junk modelling).</p>	<p>Cooking club</p> <p>Chartwells</p>

	<ul style="list-style-type: none"> <li>○ apply their understanding of computing to program, monitor and control their products.</li> </ul>			<p>before') on foods and I can identify and use these, I know that different food should be stored in different places in the fridge and be covered to keep it at its best and prevent cross contamination spoil and decay due to the action of micro-organisms, insects and other pests.</p>		
<p><b>KS3</b></p>	<p><b>Design and Technology</b>  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 domestic and local contexts [for example, the home, health, leisure and culture], and industrial contexts [for example, engineering, manufacturing, construction, food, energy, agriculture (including horticulture) and fashion].</p> <p><b>Design</b></p> <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>♣ identify and solve their own design problems and understand how to reformulate problems given to them</li> <li>♣ develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations</li> <li>♣ use a variety of approaches [for example, biomimicry and user-centred design], to generate creative ideas and avoid stereotypical responses</li> <li>♣ develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools</li> </ul> <p><b>Make</b></p> <ul style="list-style-type: none"> <li>♣ select from and use specialist tools, techniques, processes, equipment and machinery precisely, including computer-aided manufacture</li> <li>♣ select from and use a wider, more complex range of materials, components and ingredients, taking into account their properties</li> <li>♣ analyse the work of past and present professionals and others to develop and broaden their understanding</li> <li>♣ investigate new and emerging technologies</li> <li>♣ test, evaluate and refine their ideas and products against a specification, taking into account the views of intended users and other interested groups.</li> <li>♣ understand developments in design and technology, its impact on individuals, society and the environment, and the responsibilities of designers, engineers and technologists</li> </ul> <p><b>Technical knowledge</b></p> <ul style="list-style-type: none"> <li>♣ understand and use the properties of materials and the performance of structural elements to achieve functioning solutions</li> <li>♣ understand how more advanced mechanical systems used in their products enable changes in movement and force</li> <li>♣ understand how more advanced electrical and electronic systems can be powered and used in their products [for example, circuits with heat, light, sound and movement as inputs and outputs]</li> <li>♣ apply computing and use electronics to embed intelligence in products that respond to inputs [for example, sensors], and control outputs [for example, actuators], using programmable components [for example, microcontrollers].</li> </ul> <p><b>Cooking and Nutrition</b></p> <p>understand and apply the principles of nutrition and health</p> <ul style="list-style-type: none"> <li>♣ cook a repertoire of predominantly savoury dishes so that they are able to feed themselves and others a healthy and varied diet</li> <li>♣ become competent in a range of cooking techniques [for example, selecting and preparing ingredients; using utensils and electrical equipment; applying heat in different ways; using awareness of taste, texture and smell to decide how to season dishes and combine ingredients; adapting and using their own recipes]</li> <li>♣ understand the source, seasonality and characteristics of a broad range of ingredients.</li> </ul>			<p>Components (Standard)  Polymers - Thermoforming (example: Polypropylene) and Thermosetting  Conductive  LED's, switch, battery (storing energy), resistor  Rivets  Veneer  Embroidery  Fibres, yarn, fabric  Woven, Bond, Knitted  Loom</p>	<p>Healthy Future cooking lessons and clubs</p>	