

## Design and Technology

Summary and Progression			Designing
Reception	<u>Y1 and Y2</u>	<u>Y3 Y4 Y5</u>	<u>Y6</u>
<ul style="list-style-type: none"> <li>• Create collaboratively, sharing ideas, resources and skills.</li> <li>• Discuss design ideas and investigate suitable materials to use</li> </ul>	<ul style="list-style-type: none"> <li>• Work confidently within a range of contexts, such as imaginary, story-based, home, school, gardens, playgrounds, local community, industry and the wider environment.</li> <li>• State what products they are designing and making.</li> <li>• Say whether their products are for themselves or other users.</li> <li>• Describe what their products are for.</li> <li>• Say how their products will work.</li> <li>• Say how they will make their products suitable for their intended users.</li> <li>• Use simple design criteria to help develop their ideas.</li> <li>• Generate ideas by drawing on their own experiences.</li> <li>• Use knowledge of existing products to help come up with ideas.</li> <li>• Develop and communicate ideas by talking and drawing.</li> <li>• Model ideas by exploring materials, components and construction kits and by making templates and mockups.</li> <li>• Use information and communication technology, where appropriate, to develop and communicate their ideas.</li> </ul>	<ul style="list-style-type: none"> <li>• Gather information about the needs and wants of particular individuals and groups.</li> <li>• Develop their own design criteria and use these to inform their idea.</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> <li>• Work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment.</li> <li>• Describe the purpose of their products.</li> <li>• Indicate the design features of their products that will appeal to intended users.</li> <li>• Explain how particular parts of their products work.</li> <li>• Share and clarify ideas through discussion.</li> <li>• Model their ideas using prototypes and pattern pieces.</li> <li>• Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas.</li> <li>• Use computer-aided design to develop and communicate their ideas.</li> </ul>	<ul style="list-style-type: none"> <li>• Carry out research, using surveys, interviews, questionnaires and web-based resources.</li> <li>• Identify the needs, wants, preferences and values of particular individuals and groups.</li> <li>• Develop a simple design specification to guide their thinking.</li> <li>• Work confidently within a range of contexts, such as the home, school, leisure, culture, enterprise, industry and the wider environment.</li> <li>• Describe the purpose of their products.</li> <li>• Indicate the design features of their products that will appeal to intended users.</li> <li>• Explain how particular parts of their products work.</li> <li>• Generate innovative ideas, drawing on research.</li> <li>• Make design decisions, taking account of constraints such as time, resources and cost.</li> <li>• Share and clarify ideas through discussion.</li> <li>• Model their ideas using prototypes and pattern pieces.</li> <li>• Use annotated sketches, cross-sectional drawings and exploded diagrams to develop and communicate their ideas.</li> <li>• Use computer-aided design to develop and communicate their ideas.</li> </ul>
Summary and Progression			Making
Reception	<u>Y1 and Y2</u>	<u>Y3 Y4 Y5</u>	<u>Y6</u>
<ul style="list-style-type: none"> <li>• Manipulates materials to achieve a planned effect.</li> <li>• Constructs with a purpose in mind, using a variety of resources</li> </ul>	<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 and</li> </ul>	<ul style="list-style-type: none"> <li>• Order the main stages of making.</li> <li>• Measure, mark out, cut and shape materials and components with some accuracy.</li> <li>• Assemble, join and combine materials and</li> </ul>	<ul style="list-style-type: none"> <li>• Produce appropriate lists of tools, equipment and materials that they need.</li> <li>• Formulate step-by-step plans as a guide to making.</li> </ul>

<ul style="list-style-type: none"> <li>• Uses simple tools and techniques competently and appropriately.</li> <li>• Selects appropriate resources and adapts work where necessary</li> </ul>	<p>components according to their characteristics.</p> <ul style="list-style-type: none"> <li>• Follow procedures for safety and hygiene.</li> <li>• Use a range of materials and components, including construction materials and kits, textiles, food ingredients and mechanical components.</li> <li>• Measure, mark out, cut 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>components with some accuracy.</p> <ul style="list-style-type: none"> <li>• Apply a range of finishing techniques, including those from art and design, with some accuracy.</li> <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>• Follow procedures for safety and hygiene.</li> <li>• Use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components.</li> </ul>	<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>• Accurately measure, mark out, cut and shape materials and components.</li> <li>• Accurately assemble, join and combine materials and components.</li> <li>• Accurately apply a range of finishing techniques, including those from art and design.</li> <li>• Use techniques that involve a number of steps.</li> <li>• Demonstrate resourcefulness when tackling practical problem.</li> <li>• Follow procedures for safety and hygiene.</li> <li>• Use a wider range of materials and components than KS1, including construction materials and kits, textiles, food ingredients, mechanical components and electrical components.</li> </ul>
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Summary and Progression		Evaluating	
Reception	Y1 and Y2	Y3 Y4 Y5	Y6
<ul style="list-style-type: none"> <li>• Be proud of what they have created</li> <li>• Talk about what they have created</li> <li>• Return to and build on their previous learning, refining ideas and developing their ability to represent them.</li> <li>• Be proud of what they have created</li> <li>• Discuss what they have created giving reasons for their choices</li> </ul>	<ul style="list-style-type: none"> <li>• Talk about their design ideas and what they are making.</li> <li>• Make simple judgements about their products and ideas against design criteria.</li> <li>• Suggest how their products could be improved.</li> <li>• Understand <b>what</b> products are.</li> <li>• Understand <b>who</b> products are for.</li> <li>• Understand what products are for.</li> <li>• Know how products work.</li> </ul>	<ul style="list-style-type: none"> <li>• Refer to their design criteria as they design and make.</li> <li>• Use their design criteria to evaluate their completed products.</li> <li>• Understand who designed and made the products.</li> <li>• Understand where products were designed and made.</li> <li>• Understand when products were designed and made.</li> <li>• Know whether products can be recycled or reused.</li> </ul>	<ul style="list-style-type: none"> <li>• Critically evaluate the quality of the design, manufacture and fitness for purpose of their products as they design and make.</li> <li>• Evaluate their ideas and products against their original design specification.</li> <li>• Identify the strengths and areas for development in their ideas and products.</li> <li>• Consider the views of others, including intended users, to improve their work.</li> <li>• Understand how much products cost to make.</li> <li>• Understand how innovative products are.</li> </ul>

	<ul style="list-style-type: none"> <li>• Know how products are used.</li> <li>• Understand where products might be used.</li> <li>• Know what materials products are made from.</li> <li>• Know what they like and dislike about products.</li> </ul>	<ul style="list-style-type: none"> <li>• Identify the strengths and areas for development in their ideas and products.</li> <li>• Consider the views of others, including intended users, to improve their work.</li> <li>• Understand how well products have been designed.</li> <li>• Understand how well products have been made.</li> <li>• Understand why materials have been chosen.</li> <li>• Know what methods of construction have been used.</li> <li>• Understand how well products work.</li> <li>• Understand How well products achieve their purposes.</li> <li>• Understand How well products meet user needs and wants.</li> <li>• Know about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products.</li> </ul>	<ul style="list-style-type: none"> <li>• Understand how sustainable the materials in products are.</li> <li>• Know what impact products have beyond their intended purpose.</li> <li>• Understand how well products have been designed.</li> <li>• Understand how well products have been made.</li> <li>• Know why materials have been chosen.</li> <li>• Understand what methods of construction have been used.</li> <li>• Understand how well products work.</li> <li>• Understand how well products achieve their purposes.</li> <li>• Understand how well products meet user needs and wants.</li> <li>• Know about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products.</li> </ul>
<b>Summary and Progression</b>			<b>Technical Knowledge</b>
<b>Reception</b>	<b><u>Y1 and Y2</u></b>	<b><u>Y3 Y4 Y5</u></b>	<b><u>Y6</u></b>
<ul style="list-style-type: none"> <li>• Key vocabulary</li> </ul> <p>Think, make, soft, hard, big, small</p> <p>Make, build, cut, join</p> <ul style="list-style-type: none"> <li>• Key Vocabulary</li> </ul> <p>Smooth, shiny, rough, prickly, flat, patterned, bumpy, soft, hard, design, ideas, create, make, cut, materials, tools, fold, join, fix, build</p>	<ul style="list-style-type: none"> <li>• Understand the simple working characteristics of materials and components.</li> <li>• Understand the movement of simple mechanisms such as levers, sliders, wheels and axles.</li> <li>• Know how freestanding structures can be made stronger, stiffer and more stable.</li> <li>• Understand that a 3-d textiles product can be assembled from two identical fabric shapes.</li> <li>• Understand the correct technical vocabulary for the projects they are undertaking.</li> </ul>	<ul style="list-style-type: none"> <li>• Understand how mechanical systems such as levers and linkages or pneumatic systems create movement.</li> <li>• Understand how simple electrical circuits and components can be used to create functional products.</li> <li>• Know how to program a computer to control their products.</li> <li>• Know how to make strong, stiff shell structures.</li> <li>• Understand that a single fabric shape can be used to make a 3d textiles product.</li> <li>• Understand that food ingredients can be fresh, pre-cooked and processed.</li> <li>• Know how to use learning from science to help design and make products that work.</li> <li>• Know how to use learning from mathematics to help design and make products that work.</li> <li>• Understand that materials have both functional properties and aesthetic qualities.</li> <li>• Understand that materials can be combined and</li> </ul>	<ul style="list-style-type: none"> <li>• Understand how mechanical systems such as cams or pulleys or gears create movement.</li> <li>• Understand more complex electrical circuits and components can be used to create functional products.</li> <li>• Know how to program a computer to monitor changes in the environment and control their products.</li> <li>• Know how to reinforce and strengthen a 3D framework.</li> <li>• Understand that a 3D textiles product can be made from a combination of fabric shapes.</li> <li>• Understand that a recipe can be adapted by adding or substituting one or more ingredients.</li> <li>• Know how to use learning from science to help design and make products that work.</li> <li>• Know how to use learning from mathematics to help design and make products that work.</li> <li>• Understand that materials have both</li> </ul>

		<p>mixed to create more useful characteristics.</p> <ul style="list-style-type: none"> <li>• Know that mechanical and electrical systems have an input, process and output.</li> <li>• Understand the correct technical vocabulary for the projects they are undertaking.</li> </ul>	<p>functional properties and aesthetic qualities.</p> <ul style="list-style-type: none"> <li>• Understand that materials can be combined and mixed to create more useful characteristics.</li> <li>• Know that mechanical and electrical systems have an input, process and output.</li> <li>• Understand the correct technical vocabulary for the projects they are undertaking.</li> </ul>
<b>Summary and Progression</b>			<b>Cooking and Nutrition</b>
<b>Reception</b>	<b><u>Y1 and Y2</u></b>	<b><u>Y3 Y4 Y5</u></b>	<b><u>Y6</u></b>
<p><b><u>Healthy Me from PHSE curriculum</u></b></p> <ul style="list-style-type: none"> <li>• Understand that I need to exercise to keep my body healthy.</li> <li>• Understand how moving and resting are good for my body.</li> <li>• Know which foods are healthy and not so healthy and can make healthy eating choices.</li> <li>• Know how to help myself go to sleep and understand why sleep is good for me.</li> <li>• Wash my hands thoroughly and understand why this is important especially.</li> <li>• Know what a stranger is and how to stay safe if a stranger approaches me.</li> </ul>	<ul style="list-style-type: none"> <li>• Know that all food comes from plants or animals.</li> <li>• Know that food has to be farmed, grown elsewhere (e.g. Home) or caught.</li> <li>• Know how to name and sort foods into the five groups in The Eatwell Plate.</li> <li>• Know that everyone should eat at least five portions of fruit and vegetables every day.</li> <li>• Understand how to prepare simple dishes safely and hygienically, without using a heat source.</li> <li>• Know how to use techniques such as cutting, peeling and grating Know that food ingredients should be combined according to their sensory characteristics.</li> </ul>	<ul style="list-style-type: none"> <li>• Know that a healthy diet is made up from a variety and balance of different food and drink, as depicted in The Eatwell Plate.</li> <li>• Know that to be active and healthy, food and drink are needed to provide energy for the body.</li> <li>• Know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world.</li> <li>• Know how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.</li> <li>• Know how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</li> </ul>	<ul style="list-style-type: none"> <li>• Understand that seasons may affect the food available.</li> <li>• Understand how food is processed into ingredients that can be eaten or used in cooking.</li> <li>• Know that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world.</li> <li>• Understand that recipes can be adapted to change the appearance, taste, texture and aroma.</li> <li>• Know that different food and drink contain different substances – nutrients, water and fibre – that are needed for health.</li> <li>• Know how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source.</li> <li>• Know how to use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking.</li> </ul>

