

<b>D&amp;T - Skills and Knowledge Progression</b>		
<b>Nursery Reception Expectations</b>	<b>Key Stage 1 National Curriculum Expectation</b>	<b>Key Stage 2 National Curriculum Expectation</b>
<p><b>Design</b></p> <ul style="list-style-type: none"> <li>• Develop own ideas &amp; decide which materials to use to express them</li> <li>• Develop own ideas through experimentation with diverse materials to express &amp; communicate their discoveries &amp; understanding</li> <li>• Create collaboratively sharing ideas, resources &amp; skills</li> </ul> <p><b>Make</b></p> <ul style="list-style-type: none"> <li>• Use various construction materials, e.g. joining pieces, stacking vertically and horizontally, balancing, making enclosures and creating spaces</li> <li>• Use available resources to create props or creates imaginary ones to support play</li> <li>• Use increasing knowledge &amp; understanding of tools &amp; materials to explore their interests &amp; enquiries &amp; develop their thinking</li> <li>• Create representations both imaginary &amp; real-life ideas, events, people &amp; objects</li> </ul> <p><b>Evaluate</b></p> <ul style="list-style-type: none"> <li>• Notice what other children &amp; adults do, mirroring what is observed, adding variations &amp; then doing it spontaneously</li> </ul> <p>Express &amp; communicates working theories, feelings &amp; understandings</p> <ul style="list-style-type: none"> <li>• Responds imaginatively to art works &amp; objects</li> <li>• Return to &amp; build on previous learning, refining ideas &amp; developing their ability to represent them</li> <li>• Discuss problems &amp; how they might be solved</li> </ul> <p><b>Technical Knowledge</b></p> <ul style="list-style-type: none"> <li>• Develop new skills &amp; techniques</li> <li>• Use tools for a purpose</li> <li>• Use different techniques for joining materials</li> <li>• Use tools independently, with care &amp; precision</li> </ul> <p>*Children handle equipment and tools effectively, including pencils for writing</p> <p><b>Cooking and Nutrition</b></p> <ul style="list-style-type: none"> <li>• Talk about the differences between materials &amp; changes they notice</li> <li>• Make healthy choices</li> <li>• Look closely at similarities, differences, patterns &amp; change</li> <li>• Know &amp; talk about the different factors that support their overall health &amp; well-being</li> </ul>	<p><b>Pupils should be taught to:</b></p> <p><b>Design</b></p> <ul style="list-style-type: none"> <li>• 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, mock-ups 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 design criteria.</li> </ul> <p><b>Technical Knowledge</b></p> <ul style="list-style-type: none"> <li>• build structures, exploring how they can be made stronger, stiffer and more stable;</li> <li>• explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.</li> </ul> <p><b>Cooking and Nutrition</b></p> <ul style="list-style-type: none"> <li>• use the basic principles of a healthy and varied diet to prepare dishes;</li> <li>• understand where food comes from</li> </ul>	<p><b>Pupils should be taught to:</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 innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups;</li> <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> <ul style="list-style-type: none"> <li>• select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately;</li> <li>• 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 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> <li>• apply their understanding of computing to program, monitor and control their products.</li> </ul> <p><b>Cooking and Nutrition</b></p> <ul style="list-style-type: none"> <li>• understand and apply the principles of a healthy and varied diet;</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>

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<b>Children use the basic principles of a healthy and varied diet to prepare dishes. They understand where food comes from</b>		<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.</b>			
<b>Food based product:</b> Gingerbread biscuits Pancakes Healthy sandwiches	<b>Food based product:</b> Healthy sandwiches & pizza	<b>Food based product:</b> Roman honey biscuits Viking soda bread Viking Pancakes Rainforest cookies	<b>Food based product:</b> Ancient Egypt Flatbread	<b>Food based product:</b> WW2 recipes Greek recipes	<b>Food based product:</b> Chocolate truffles Simple recipes e.g. pasta (transition focus)
Discuss where in the world different foods originate from understand that all food comes from plants or animals	understand that food has to be farmed, grown elsewhere (e.g. home) or caught	start to know when, where and how food is grown in different climates and countries	start to know when, where and how food is grown in different climates and countries	know, explain and give examples of food that is grown (such as pears, wheat and potatoes), reared (such as poultry and cattle) and caught (such as fish) in the UK,	know, explain and give examples of food that is grown (such as pears, wheat and potatoes), reared (such as poultry and cattle) and caught (such as fish) in the UK, Europe and the wider world
		start to understand seasonality	Know what food are grown in each season	understand about seasonality, how this may affect the food availability	understand that food is processed into ingredients that can be eaten or used in cooking;
		understand how to prepare and cook a savoury dish safely and hygienically	with support, use a heat source to cook ingredients showing awareness of the need to control the temperature of the hob and/or oven;	demonstrate how to prepare and cook a savoury dish safely and hygienically	demonstrate how to prepare and cook a variety of predominantly savoury dishes safely and hygienically including, where appropriate, the use of a heat source;
		use a range of techniques such as grating, cutting, kneading and baking	use a range of techniques such as mashing, whisking, crushing, grating, cutting, kneading and baking	use a range of techniques such as mashing, whisking, crushing, grating, cutting, kneading and baking where appropriate for the dish	demonstrate how to use a range of cooking techniques, grilling and boiling
Sort the five main food groups NHS EATWELL GUIDE	Name the five main food groups NHS EATWELL GUIDE	explain that a healthy diet is made up of a variety and balance of different food and	explain that a healthy diet is made up of a variety and balance of different food and	explain that foods contain different substances, such as	explain that foods contain different substances, such as protein, that are needed for

<p>*fruit and vegetables.</p> <p>*potatoes, bread, rice, pasta and other starchy carbohydrates.</p> <p>*beans, pulses, fish, eggs, meat and other proteins.</p> <p>*dairy and alternatives.</p> <p>*oils and spreads.</p>	<p>*fruit and vegetables.</p> <p>*potatoes, bread, rice, pasta and other starchy carbohydrates.</p> <p>*beans, pulses, fish, eggs, meat and other proteins.</p> <p>*dairy and alternatives.</p> <p>*oils and spreads.</p>	<p>drink, as represented in the Eatwell Guide</p>	<p>drink, as represented in the Eatwell Guide and be able to apply these principles when planning</p>	<p>protein, that are needed for health</p>	<p>health and be able to apply these principles when planning and preparing dishes</p>
<p>understand that everyone should eat at least five portions of fruit and vegetables every day AND WHY</p>	<p>understand that everyone should eat at least five portions of fruit and vegetables every day AND WHY</p>	<p>understand that to be active and healthy, nutritious food and drink are needed to provide</p>	<p>Use the knowledge of different foods to help ration healthy portions of each food type</p>	<p>Use the knowledge of different foods and apply this when planning a meal.</p>	<p>Use the knowledge of different foods to explain why they have included them in a meal.</p>
	<p>With support prepare ingredients using cooking utensils.</p>	<p>Begin to prepare ingredients using appropriate cooking utensils</p>	<p>prepare ingredients using appropriate cooking utensils</p>	<p>adapt and refine recipes by adding or substituting one or more ingredients to change the appearance, taste, texture and aroma;</p>	<p>alter methods, cooking times and/or temperatures</p>
<p>Prepare a simple dish and link to the EATWELL GUIDE five main food groups</p>	<p>Design and prepare a dish and link to the EATWELL GUIDE five main food groups</p>	<p>start to independently follow a recipe</p>	<p>measure and weigh ingredients to the nearest gram and millilitre</p>	<p>independently follow a recipe</p>	<p>measure accurately and calculate ratios of ingredients to scale up or down from a recipe</p>

# Design

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>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.</p> <p>They should work in a range of relevant contexts [for example, the home and school, gardens and playgrounds, the local community, industry and the wider environment]. Children design purposeful, functional, appealing products for themselves and other users based on design criteria.</p> <p>They generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology.</p>		<p>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.</p> <p>They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].</p> <p>Children use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.</p> <p>They 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>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.</p> <p>They should work in a range of relevant contexts [for example, the home, school, leisure, culture, enterprise, industry and the wider environment].</p> <p>Children use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups.</p> <p>They 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><b>Construction/ Textile based products:</b></p> <p>Coat for Paddington Bear            Celebration card            Moving puppet            Easter egg basket            Tiger mask</p>	<p><b>Construction/ Textile based products:</b></p> <p>Witches cloak            Moving picture scene from fairy tale            Celebration card</p>	<p><b>Construction/ Textile based products:</b></p> <p>Robot with moveable parts            Christmas stocking            Leather Viking purse            Viking longhouse/ship            Rainforest diorama            Rainforest cookies            Celebration card</p>	<p><b>Construction/ Textile based products:</b></p> <p>African bags            Stone Age clay jewellery            Celebration card</p>	<p><b>Construction/ Textile based products:</b></p> <p>Anderson Shelter            Chinese Lanterns            Celebration card            Greek column fixings</p>	<p><b>Construction/ Textile based products:</b></p> <p>Mayan temples            Harry Potter badges            Celebration card</p>
<p><b>Children can:</b></p> <p>Use their own experience to help generate their ideas</p>	<p><b>Children can:</b></p> <p>use their knowledge of existing products to generate ideas.</p>	<p><b>Children can:</b></p> <p>identify the design features of their products that are fit for purpose. use their knowledge of a broad range of existing products to help generate their ideas;</p>	<p><b>Children can:</b></p> <p>Identify the design features of their products that will appeal to intended customers.</p>	<p><b>Children can:</b></p> <p>Use simple research to inform ideas for an intended design. use their knowledge of a broad range of existing products to help generate their ideas;</p>	<p><b>Children can:</b></p> <p>use research to inform and develop detailed design criteria to inform the design of innovative, functional and appealing products that are fit for purpose and aimed at a target market</p>

design products that have a purpose	design products that have a purpose and are aimed at an intended user	design innovative and appealing products that have a clear purpose	design innovative and appealing products that have a clear purpose and are aimed at a specific user;	design products that have a clear purpose and indicate the design features of their products	design products that have a clear purpose and indicate the design features of their products that will appeal to the intended user
explain how their products will look	Explain how their products will work through talking and simple annotated drawings	explain how particular parts of their products work;		Explain how particular parts of their products work towards to intended purpose.	
Use sketches to communicate their ideas.	Use labelled sketches to develop design ideas.	use annotated sketches drawings to develop and communicate their ideas	Use annotated sketches and begin to use cross-sectional drawings to develop and communicate ideas.	Confidently use annotated sketches, cross-sectional drawings and begin to use exploded diagrams to develop and communicate their idea	Use exploded diagrams (possible computer aided designs), cross sectional drawings and annotated sketches to communicate ideas.
When designing, think about the purpose and the product.	When designing, explore a couple of ideas before thinking of the final design.	when designing, explore different initial ideas before coming up with a final design;	generate a range of design ideas and clearly communicate final designs	Generate a range of design ideas and clearly communicate why they have chosen their final design.	Generate a range of design ideas and have explanation for why they have chosen their final design with how it is fit for purpose.
When planning, start to choose some appropriate materials from a given selection.	When planning, choose some appropriate materials and test using templates.	When planning, start to explain their choice of materials and test ideas making prototypes.	when planning, start to explain their choice of materials and components including function and aesthetic.	consider the availability and costing of resources when planning out designs;	Plan a design within a budget considering the costing of resources
Start to design models using simple computing software;	Use simple computer software to design models	use computer-aided design to develop	use computer-aided design to develop and communicate their ideas	Use computer aided design to begin to develop a broader range of design sketches	Use computer aided design to develop sketches.
Follow simple design criteria.	Understand and follow simple design criteria.	develop and follow simple design criteria.	When developing, begin to provide explanation of design criteria.	Explain the development of design criteria.	
work in a range of relevant contexts, for example imaginary, story-based, home, school and the wider environment		work in a range of relevant contexts, for example entertainment, the home, school, leisure, food industry and the wider environment		work in a broad range of relevant contexts, for example conservation, the home, school, leisure, culture, enterprise, industry and the wider environment	

# Make

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>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 making.</p> <p>Children select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing].</p> <p>They select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</p>		<p>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 making.</p> <p>Children select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] accurately.</p> <p>They select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</p>		<p>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 making.</p> <p>Children select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately. They select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities.</p>	
<b>Children can:</b>	<b>Children can:</b>	<b>Children can:</b>	<b>Children can:</b>	<b>Children can:</b>	<b>Children can:</b>
<b>Planning</b> with support, follow a simple plan or recipe	<b>Planning</b> Begin to independently follow a plan or recipe.	<b>Planning</b> plan with growing confidence, carefully select from a range of tools and equipment	<b>Planning</b> plan with growing confidence, carefully select from a range of tools and equipment, explaining their choices	<b>Planning</b> independently plan by suggesting what to do next	<b>Planning</b> Independently plan and suggest improvements based on research
begin to select from a range of hand tools and equipment, such as scissors, graters, zesters, safe knives, juicer	Select from a range of tools and begin to understand the types of different tools.	Select from a wider range of tools and equipment.	Select from a range of tools and equipment and begin explain their choices.	with growing confidence, select from a wide range of tools and equipment, explaining their choices	explain and evaluate their choice of tools and equipment
select from a range of materials, textiles and components and begin to think about their characteristics	select from a range of materials, textiles and components according to their characteristics	select from a range of materials and components according to their functional properties	select from a range of materials and components according to their functional properties and aesthetic qualities	select from a range of materials and begin to evaluate their appropriateness	select from a range of materials and evaluate their appropriateness
				create step-by-step plans as a guide to making	

<p><b>Practical skills and techniques</b></p> <p>learn to use hand tools and kitchen equipment safely and appropriately and follow hygiene procedures</p>	<p><b>Practical skills and techniques</b></p> <p>learn to use hand tools and kitchen equipment safely and appropriately and understand hygiene procedures</p>	<p><b>Practical skills and techniques</b></p> <p>Follow safety and learn to use a range of tools and equipment safely, appropriately and accurately</p>	<p><b>Practical skills and techniques</b></p> <p>learn to use a range of tools and equipment safely, appropriately and accurately and write instructions of hygiene procedures</p>	<p><b>Practical skills and techniques</b></p> <p>Write safety instructions to use a range of tools and equipment safely and appropriately</p>	<p><b>Practical skills and techniques</b></p> <p>Evaluate appropriateness a range of tools and equipment safely and appropriately</p>
<p>use a range of materials and components, including textiles and food ingredients</p>	<p>use a range of materials and components, including textiles and food ingredients and think about appropriateness,</p>	<p>use a wider range of materials and components, including construction materials and kits, textiles and mechanical and electrical components</p>	<p>use a wider range of materials and components, and begin to evaluate appropriateness</p>	<p>use a full range of materials and components, including construction materials and kits, textiles, and mechanical component</p>	<p>use a full range of materials and components, including construction materials and kits, textiles, and mechanical component and evaluate their appropriateness</p>
<p>with help, measure and mark out materials</p>	<p>Measure and mark out materials</p>	<p>with growing independence, measure and mark out to the nearest cm</p>	<p>with growing independence, measure and mark out to the nearest cm and millimetre</p>	<p>independently take exact measurements and mark out, to the nearest millimetre</p>	<p>independently take exact measurements and mark out, to within 1 millimetre</p>
<p>Cut and shape materials</p>	<p>Independently cut and shape materials with some accuracy</p>	<p>cut, shape and begin to score materials with some degree of accuracy;</p>	<p>Cut, shape and score materials with higher degree of accuracy</p>	<p>cut a range of materials with precision and accuracy</p>	<p>shape and score materials with precision and accuracy</p>
<p>assemble, join and combine materials, components or ingredients;</p>		<p>assemble, join and combine material and components with some degree of accuracy</p>		<p>assemble, join and combine materials and components with accuracy</p>	
<p>demonstrate how to cut and shape fabric to make a simple product</p>	<p>demonstrate how to cut, shape and join fabric to make a simple product</p>	<p>demonstrate how to measure, cut, shape and join fabric beginning to show some accuracy to make a simple product</p>	<p>demonstrate how to measure, cut, shape and join fabric with some accuracy to make a simple product manipulate fabrics in simple ways to create the desired effect</p>	<p>demonstrate how to measure, make a seam allowance, tape, pin, cut, shape and join fabric with to make a more complex product</p>	<p>demonstrate how to measure, make a seam allowance, tape, pin, cut, shape and join fabric with precision to make a more complex product</p>

use a basic running stitch with support	Use a basic running stitch independently	join textiles with an appropriate sewing technique chosen with support	join textiles with an appropriate sewing technique	join textiles using a greater variety of stitches, such as backstitch, whip stitch, blanket stitch	join textiles using a greater variety of stitches, such as backstitch, whip stitch, blanket stitch and explain why the stitch has been chosen.
Measure ingredients using scales with support.	Cut and grate ingredients measuring and weighing using scales.	cut, peel and grate ingredients, including measuring and weighing ingredients using measuring cups with support.	cut, peel and grate ingredients, including measuring and weighing ingredients using measuring cups;	cut, peel and grate ingredients, including measuring and weighing using an appropriate method for the ingredient type	Cut, peel and grate ingredients explaining why they have chosen the preparation technique.
begin to use simple finishing techniques to improve the appearance of their product, such as adding simple decoration with support.	begin to use simple finishing techniques to improve the appearance of their product, such as adding simple decoration	begin to select and use different and appropriate finishing techniques to improve the appearance of a product such as paints and digital graphics	begin to select and use different and appropriate finishing techniques to improve the appearance of a product such as hemming, tie-dye, fabric paints and digital graphics	refine the finish using techniques to improve the appearance of their product, such as sanding	refine the finish using techniques to improve the appearance of their product, such as sanding or a more precise scissor cut after roughly cutting out a shape

# Evaluate

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>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.</p> <p>Children explore and evaluate a range of existing products. They evaluate their ideas and products against design criteria.</p>	<p>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.</p> <p>Children investigate and analyse a range of existing products. They evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. They understand how key events and individuals in design and technology have helped shape the world</p>	<p>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.</p> <p>Children investigate and analyse a range of existing products. They evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. They understand how key events and individuals in design and technology have helped shape the world</p>	<p>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.</p> <p>Children investigate and analyse a range of existing products. They evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. They understand how key events and individuals in design and technology have helped shape the world</p>	<p>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.</p> <p>Children investigate and analyse a range of existing products. They evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. They understand how key events and individuals in design and technology have helped shape the world.</p>	<p>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.</p> <p>Children investigate and analyse a range of existing products. They evaluate their ideas and products against their own design criteria and consider the views of others to improve their work. They understand how key events and individuals in design and technology have helped shape the world.</p>
<b>Children can:</b>	<b>Children can:</b>	<b>Children can:</b>	<b>Children can:</b>	<b>Children can:</b>	<b>Children can:</b>
explore and evaluate existing products mainly through discussions, comparisons and simple written evaluations	explore and evaluate existing products mainly through discussions and comparisons	explore and evaluate existing products, explaining the purpose of the product and whether it is designed well to meet the intended purpose within a group discussion.	explore and evaluate existing products, explaining the purpose of the product and whether it is designed well to meet the intended purpose within a group discussion.	Use questionnaires to evaluate existing products and whether they are fit for purpose.	Use an appropriate method the evaluate existing products and whether they are fit for purpose
explain positives and things to improve for existing products within a group discussion	explain positives and things to improve for existing products	explore what materials/ingredients products are made from and suggest reasons for this	explore what materials/ingredients products are made from and suggest reasons for this and whether this is fit for purpose.	Begin to complete within a group a detailed competitor analysis of other products on the market	Complete a detailed competitor analysis of other products on the market
With support, explore what materials products are made from	explore what materials products are made from	Begin to evaluate their design based on the criteria and think about	consider their design criteria as	critically evaluate the quality of design and fitness for purpose of	critically evaluate the quality of design, manufacture and fitness for purpose of products as they design and make

		ideas to improve their product	they make progress and are willing to alter their plans, sometimes considering the views of others if this helps them to improve their product;	products as they design and make	
talk about their design ideas and what they are making	evaluate their products and ideas against their simple design criteria	evaluate their product against their original design criteria	Evaluate their product and whether it is fit for purpose against their original design criteria	evaluate their ideas and products against the original design criteria, making changes as needed	evaluate their ideas and products against the original design criteria, making and explaining changes as needed
as they work, start to identify strengths and possible changes they might make to refine their existing design.	Identify strengths and possible changes they might make to refine their existing design.	Evaluate strengths and weaknesses of their own product and suggest changes to refine their existing design.	start to understand that the iterative process sometimes involves repeating different stages of the process.	Begin to evaluate the key events, including technological developments, and designs of individuals in design and technology that have helped shape the world.	evaluate their ideas and products against the original design criteria, making changes as needed.

# Technical Knowledge

Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
<p>Children build structures, exploring how they can be made stronger, stiffer and more stable. They explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products</p>		<p>Children apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</p> <p>They understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].</p> <p>They understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].</p> <p>They apply their understanding of computing to program, monitor and control their products.</p>		<p>Children apply their understanding of how to strengthen, stiffen and reinforce more complex structures.</p> <p>They understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages].</p> <p>They understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors].</p> <p>They apply their understanding of computing to program, monitor and control their products</p>	
<b>Children can:</b>	<b>Children can:</b>	<b>Children can:</b>	<b>Children can:</b>	<b>Children can:</b>	<b>Children can:</b>
<p>Begin to use materials with different properties. build simple structures, exploring how they can be made stronger, stiffer and more stable</p>	<p>Use materials with different properties and explain why they have chosen that material.</p>	<p>understand that materials have both functional properties and aesthetic qualities</p>	<p>understand that materials have both functional properties and aesthetic qualities and explain why they have chosen that material for their design</p>	<p>Begin to apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products</p>	<p>apply their understanding of how to strengthen, stiffen and reinforce more complex structures in order to create more useful characteristics of products</p>
		<p>understand and demonstrate how mechanical and electrical systems have an input and output process</p>	<p>understand how mechanical and electrical systems have an input and output process</p>	<p>Begin to create and demonstrate that mechanical and electrical systems have an input, process and output</p>	<p>create and demonstrate that mechanical and electrical systems have an input, process and output</p>

		make and represent simple electrical circuits, such as a series and parallel, and components to create functional product			
talk about and start to understand the simple working characteristics of materials and components		explain how mechanical systems such as levers and linkages create movement	Begin to show how mechanical systems create movement.	explain how mechanical systems, such as cams, create movement and use mechanical systems in their products	use mechanical systems in their products and explain why they have chosen each mechanical system.
explore and create products using mechanisms, such as levers, sliders and wheels		use mechanical systems in their products.	Use mechanical systems in their products which are fit for purpose	Begin to use computing to program and control a product.	apply their understanding of computing to program, monitor and control a product with a mechanical system

