

Design and Technology Progression Mapping

Nursery	Reception
<p><b>Managing self</b> Select and use activities and resources, with help when needed Select and use resources to help them to achieve a goal they have chosen or one which is suggested to them</p> <p><b>Gross motor skills</b> Choose the right resources to carry out their own plan</p> <p><b>Fine motor skills</b> Use one-handed tools and equipment Use a comfortable grip with good control when holding pens and pencils</p> <p><b>The natural world</b> Explore how things work Explore and talk about forces they can feel</p> <p><b>Creating with materials</b> Explore different materials freely, in order to develop their ideas about how to use them and what to make Create closed shapes with continuous lines and begin to use these shapes to represent objects Create imaginative and complex 'small worlds' with blocks and construction kits Join materials and explore different textures Draw with increasing complexity and detail, such as representing a face with a circle and including details</p>	<p><b>Speaking</b> Use talk to help work out problems and organize thinking and activities explain how things work and why they might happen</p> <p><b>Fine motor skills</b> Develop their small motor skills so that they can use a range of tools competently, safely and confidently Show a preference for a dominant hand Use a range of small tools, including scissors and paint brushes Begin to show accuracy and care when drawing.</p> <p><b>Creating with materials</b> Explore, use and refine a variety of artistic effects to express their ideas and feelings Create collaboratively sharing ideas, resources and skills Return to and build on their previous learning, refining ideas and developing their ability to represent them Share their creations, explaining the process they have used Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function</p>



	Equipment and Skills Introduced					
	Week 1	Week 2	Week 3	Week 4	Week 5	Week 6
<b>Autumn 1</b>	<b>Glue Sticks</b> <i>Removing and returning lids Twisting up and down Using efficiently</i>	<b>Felt Tips</b> <i>Storing lid on end Returning lids</i>	<b>Paper/Card Strips</b> <i>Zig-Zags Curls</i>	<b>Scissors and Wavy Scissors</b> <i>L/R handed Moving and using safely</i>	<b>Cartons and Tubes</b> <i>Simply Attachment</i>	<b>Masking Tape</b> <i>Improving 3D Models Using small amounts Adding tape to edge of table ready for use Labelling- drawing on masking tape</i>
<b>Autumn 2</b>	<b>Pipe Cleaners</b> <i>Curling Cutting Attaching</i>	<b>Tissue Paper</b> <i>Cutting/ripping Scrunching Glue Sticks/PVA Marking and cutting</i>	<b>PVA Glue</b> <i>Pouring Spreaders When to use</i>	<b>Treasury Tags</b> <i>Hole punching Attaching</i>	<b>Cellophane</b> <i>Properties of cellophane Windows and covers</i>	<b>Fringes and Feathering</b> <i>Recap paper skills Small snips</i>
<b>Spring 1</b>	<b>Split Pins</b> <i>Attaching and moving</i>	<b>String and Wool</b> <i>Cutting Measuring Knots and bows</i>	<b>Lolly Sticks and Match Sticks</b> <i>Glue sticks, tape or PVA Colouring When and why</i>	<b>Fabric</b> <i>Cutting Attaching</i>	<b>Cellotape</b> <i>Cutting</i>	<b>Elastic Bands</b>
<b>Spring 2</b>	<b>Reviewing 3D Modelling</b> <i>Celebrating previous success Discussing problems or difficulties (planning reviewed accordingly)</i>	<b>Paper/Card Strips</b> <i>Attaching 3D Models</i>	<b>Plastic Junk Modelling</b> <i>Glue or tape? Cutting</i>	<b>Metal Junk Modelling</b> <i>Glue or tape? Properties of metals Cutting safely</i>	<b>Attachment Techniques</b> <i>Flange Tabs Slots</i>	
<b>Summer 1</b>	<b>Attachment Techniques</b> <i>Reviewing and developing</i>	<b>Is it strong?</b> <i>Constructing up Columns</i>		<b>Mask Making</b> <i>Elastic or String? Eye holes</i>	<b>Can it move?</b> <i>Wheels and Vehicles</i>	
<b>Summer 2</b>	<b>Stapler</b> <i>Safety When or why</i>	<b>Can I wear it?</b> <i>Hats and clothes</i>		<b>Will it Float?</b> <i>Boats and submarines</i>		<b>Is it waterproof?</b> <i>Extending on floating junk modelling</i>



<https://www.nurseryworld.co.uk/features/article/eyfs-best-practice-all-about-junk-modelling>

<https://fennies.com/blog/benefits-of-junk-modelling>



Year 1

	Substantive knowledge	Disciplinary knowledge and skills	Vocabulary   Tier 2 and 3
Summer Spotlight	<p>Begin to know and understand about significant products, individuals and key events that have helped shape the world.</p> <p>Textiles Shape textiles using templates Join textiles using running stitch. Colour and decorate textiles using a number of techniques (such as dyeing, adding sequins or printing)</p>	<p>Designing Design purposeful, functional, appealing products for themselves and other users based on design criteria- refining design as work progresses. Generate, develop, model and communicate their ideas through templates, mock-ups and, where appropriate, information and communication technology Making Select from and use a wide range of materials and components, including construction materials and ingredients and textiles, according to their characteristics. Evaluating and improving Evaluate; explore and evaluate a range of existing products Evaluate their ideas and products against design criteria</p>	<p>Disciplinary Design, ideas, choose, drawing, make, materials, tools, evaluate, improve</p> <p>Substantive Pattern, join, mark out, decorate, running stitch, needle, fabric, recycled, reclaimed, sustainable</p>
<p>NC coverage</p> <p>Design Design purposeful, functional, appealing products for themselves and other users based on design criteria Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology Make Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics Evaluate Explore and evaluate a range of existing products Evaluate their ideas and products against design criteria</p> <p>Technical knowledge Build structures, exploring how they can be made stronger, stiffer and more stable Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products</p>			
STEM mornings	Structures	Making	Substantive Straight, cut, fold, join, fix, weak,



	Build structures exploring how they can be stronger, stiffer and more stable	Select from and use a range of tools and equipment to perform practical tasks (for example joining and finishing.)	Strong
NC coverage Make Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Technical knowledge Build structures, exploring how they can be made stronger, stiffer and more stable			
TastEd	<b>Food</b> Use the basic principles of a healthy and varied diet to prepare dishes. Understand where food comes from Use techniques such as cutting and peeling. Prepare simple dishes safely and hygienically, without using a heat source	<b>Making</b> Select from and use a wide range of materials and components, including construction materials and ingredients and textiles, according to their characteristics. Cut materials safely using tools provided.	<b>Substantive</b> Fruit, vegetables, descriptive vocabulary, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients
NC coverage Make Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics Cooking and nutrition Use the basic principles of a healthy and varied diet to prepare dishes Understand where food comes from			

## Year 2

	Substantive knowledge	Disciplinary knowledge and skills	Vocabulary   Tier 2 and 3
Summer Spotlight	Begin to know and understand about significant products, individuals and key events that have helped shape the world. <b>Mechanics</b> Explore and use wheels, axles and axle holders. Distinguish between fixed and freely moving axles. Know and use technical vocabulary relevant to the project.	<b>Designing</b> Generate initial ideas and simple design criteria through talking and using own experiences. Develop and communicate ideas through drawings and mock-ups. <b>Making</b> Select from and use a range of tools and equipment to perform practical tasks such as cutting and joining to allow movement and finishing.	<b>Disciplinary</b> Design, make, evaluate, purpose, user, criteria, functional <b>Substantive</b> vehicle, wheel, axle, axle holder, chassis, body, cab, assembling, cutting, joining, shaping, finishing, fixed, free, moving, mechanism names of tools, equipment and materials used



		<p>Select from and use a range of materials and components such as paper, card, plastic and wood according to their characteristics</p> <p>Evaluating and improving</p> <p>Explore and evaluate a range of products with wheels and axles.</p> <p>Evaluate their ideas throughout and their products against original criteria.</p>	
<p>NC coverage</p> <p>Design</p> <p>Design purposeful, functional, appealing products for themselves and other users based on design criteria</p> <p>Generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology</p> <p>Make</p> <p>Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</p> <p>Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics</p> <p>Evaluate</p> <p>Explore and evaluate a range of existing products</p> <p>Evaluate their ideas and products against design criteria</p> <p>Technical knowledge</p> <p>Build structures, exploring how they can be made stronger, stiffer and more stable</p> <p>Explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products</p>			
STEM mornings	<p><b>Structures</b></p> <p>Build structures exploring how they can be stronger, stiffer and more stable</p>	<p><b>Making</b></p> <p>Select from and use a range of tools and equipment to perform practical tasks (for example joining and finishing.)</p>	<p>Substantive</p> <p>structure, base, underneath, thicker, thinner, corner, point, straight, curved, rectangle, cube, cuboid, cylinder</p>
<p>NC coverage</p> <p>Make</p> <p>Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</p> <p>Technical knowledge</p> <p>Build structures, exploring how they can be made stronger, stiffer and more stable</p>			
TastEd	<p><b>Food</b></p> <p>Use the basic principles of a healthy and varied diet to prepare dishes.</p> <p>Understand where food comes from</p> <p>Use techniques such as cutting and peeling.</p> <p>Prepare simple dishes safely and hygienically, without using a heat source</p>	<p><b>Making</b></p> <p>Select from and use a wide range of materials and components, including construction materials and ingredients and textiles, according to their characteristics.</p> <p>Cut materials safely using tools provided.</p>	<p>Substantive</p> <p>Fruit, vegetables, descriptive vocabulary of taste and texture slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients, planning, tasting</p>
<p>NC coverage</p> <p>Make</p> <p>Select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing]</p>			



Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

Cooking and nutrition

Use the basic principles of a healthy and varied diet to prepare dishes

Understand where food comes from

## Year 3

	Substantive knowledge	Disciplinary knowledge and skills	Vocabulary   Tier 2 and 3
Summer Spotlight	<p>Understand how key events and individuals in DT have helped shape the world.</p> <p><b>Mechanics</b></p> <p>Choose suitable techniques to construct products or to repair items.</p> <p>Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages</p> <p>Understand and use lever and linkage mechanisms.</p> <p>Distinguish between fixed and loose pivots.</p> <p>Know and use technical vocabulary relevant to the project.</p>	<p><b>Designing</b></p> <p>Generate realistic ideas and their own design criteria through discussion, focusing on the needs of the user.</p> <p>Use annotated sketches and prototypes to develop, model and communicate ideas</p> <p><b>Making</b></p> <p>Order the main stages of making.</p> <p>Select from and use appropriate tools with some accuracy to cut, shape and join paper and card.</p> <p>Select from and use finishing techniques suitable for the product they are creating.</p> <p>Measure and mark out to the nearest centimetre.</p> <p><b>Evaluating and improving</b></p> <p>Investigate and analyse books and, where available, other products with lever and linkage mechanisms.</p> <p>Evaluate their own products and ideas against criteria and user needs, as they design and make</p>	<p><b>Disciplinary</b></p> <p>User, purpose, function, prototype, design criteria, innovative, appealing, design brief</p> <p><b>Substantive</b></p> <p>Mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output, linear, rotary, oscillating, reciprocating</p>

NC coverage

Design

Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups

Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design

Make

Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately

Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities

Evaluate

Investigate and analyse a range of existing products

Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work

Understand how key events and individuals in design and technology have helped shape the world

Technical knowledge

Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]



STEM mornings	Electrical systems Understand and use electrical systems in their products Create series circuits	Making Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining) accurately	Substantive User, fault, toggle switch, insulator, conductor, battery holder, crocodile clip
<p>NC coverage Make Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities Technical knowledge Understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]</p>			
TastEd	Food 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 Focusing on: preparing ingredients hygienically and using appropriate utensils. Follow a recipe Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed Use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, and baking	Making Select from and use a wide range of materials and components, including construction materials and ingredients and textiles, according to their characteristics. Cut materials safely using tools provided.	Substantive Texture, taste, appearance, preference, greasy, moist, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned
<p>NC coverage Make 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 Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics Cooking and nutrition Understand and apply the principles of a healthy and varied diet Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed.</p>			



	Substantive knowledge	Disciplinary knowledge and skills	Vocabulary   Tier 2 and 3
<p>Summer Spotlight</p>	<p>Understand how key events and individuals in DT have helped shape the world.</p> <p>Structures Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Develop and use knowledge of how to construct strong, stiff shell structures. Develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes Know and use technical vocabulary relevant to the project. Programing (through computing project) Apply their understanding of computing to programme and control their products Connect simple electrical components in a series circuit and program an interface to enhance the way the product works. Investigate and analyse a range of powered products, including programmed, and evaluate their own products and design criteria. Understand and use computing to program and control products with electrical systems.</p>	<p>Designing Generate realistic ideas and design criteria collaboratively through discussion, focusing on the needs of the user and purpose of the product. Develop ideas through the analysis of existing products and use annotated sketches and prototypes to model and communicate ideas.</p> <p>Making Order the main stages of making. Select and use appropriate tools to measure, mark out, cut, score, shape and assemble with some accuracy. Explain their choice of materials according to functional properties and aesthetic qualities. Use finishing techniques suitable for the product they are creating</p> <p>Evaluating and improving Investigate and evaluate a range of existing shell structures including the materials, components and techniques that have been used. Test and evaluate their own products against design criteria and the intended user and purpose.</p>	<p>Disciplinary Decision, evaluating, design brief design criteria, innovative, prototype</p> <p>Substantive Shell structure, three-dimensional (3-D) shape, net, cube, cuboid, prism, vertex, edge, face, length, width, breadth, capacity, marking out, scoring, shaping, tabs, adhesives, joining, assemble, accuracy, material, stiff, strong, reduce, reuse, recycle, corrugating, ribbing, laminating, font, lettering, text, graphics,</p>
<p>NC coverage</p> <p>Design Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p>Make Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</p> <p>Evaluate Investigate and analyse a range of existing products Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work Understand how key events and individuals in design and technology have helped shape the world</p> <p>Technical knowledge</p>			





<p>Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]          Apply their understanding of computing to programme and control their products          Apply their understanding of how to strengthen, stiffen and reinforce more complex structures ]</p>			
STEM mornings	<p><b>Mechanics</b>          Choose suitable techniques to construct products or to repair items.          Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</p>	<p><b>Making</b>          Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining) accurately</p>	<p><b>Substantive</b>          Mechanism, lever, linkage, pivot, slot, bridge, guide, linear, rotary, oscillating, reciprocating</p>
<p>NC coverage  <b>Make</b>          Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately          Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities  <b>Technical knowledge</b>          Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</p>			
TastEd	<p><b>Food</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 Focusing on: preparing ingredients hygienically and using appropriate utensils.          Follow a recipe          Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed          Use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, and baking</p>	<p><b>Making</b>          Select from and use a wide range of materials and components, including construction materials and ingredients and textiles, according to their characteristics.          Cut materials safely using tools provided.</p>	<p><b>Substantive</b>          Texture, taste, appearance, preference, greasy, moist, fresh, savoury, hygienic, edible,          grown, reared, caught, frozen, tinned</p>
<p>NC coverage  <b>Make</b>          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          Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics  <b>Cooking and nutrition</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.</p>			

	Substantive knowledge	Disciplinary knowledge and skills	Vocabulary   Tier 2 and 3
Summer Spotlight	<p>Understand how key events and individuals in DT have helped shape the world.</p> <p>Structures</p> <p>Understand how to strengthen, stiffen and reinforce 3-D frameworks.</p> <p>Know and use technical vocabulary relevant to the project.</p> <p>Programing (through computing project)</p> <p>Apply their understanding of computing to programme and control their products</p> <p>Connect simple electrical components in a series circuit and program an interface to enhance the way the product works.</p> <p>Investigate and analyse a range of powered products, including programmed, and evaluate their own products and design criteria.</p> <p>Understand and use computing to program and control products with electrical systems</p>	<p>Designing</p> <p>Carry out research into user needs and existing products, using surveys, interviews, questionnaires and web-based resources.</p> <p>Develop a simple design specification to guide the development of their ideas and products, taking account of constraints including time, resources and cost</p> <p>Generate, develop and model innovative ideas, through discussion, prototypes and annotated sketches</p> <p>Making</p> <p>Formulate a clear plan, including a step-by-step list of what needs to be done and lists of resources to be used.</p> <p>Competently select from and use appropriate tools to accurately measure, mark out, cut, shape and join construction materials to make frameworks.</p> <p>Use finishing and decorative techniques suitable for the product they are designing and making.</p> <p>Evaluating and improving</p> <p>Investigate and evaluate a range of existing frame structures.</p> <p>Critically evaluate their products against their design specification, intended user and purpose, identifying strengths and areas for development, and carrying out appropriate tests.</p> <p>Research key events and individuals relevant to frame structures</p>	<p>Disciplinary</p> <p>Design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional</p> <p>Substantive</p> <p>Frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent , prototype</p>
<p>NC coverage</p> <p>Design</p> <p>Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups</p> <p>Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p>			



<p>Make Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</p> <p>Evaluate Investigate and analyse a range of existing products Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work Understand how key events and individuals in design and technology have helped shape the world</p> <p>Technical knowledge Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] Apply their understanding of computing to programme and control their products Apply their understanding of how to strengthen, stiffen and reinforce more complex structures ]</p>			
STEM mornings	<p><b>Mechanics</b> Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears). Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</p>	<p><b>Making</b> Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining) accurately</p>	<p>Substantive Mechanism, lever, linkage, pivot, slot, bridge, guide, linear, rotary, oscillating, reciprocating, reed switch, tilt switch, pulley, gear, driver, follower, rotation, motor, belt, spindle, motor, circuit, switch, ratio, transmit</p>
<p>NC coverage</p> <p>Make Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</p> <p>Technical knowledge Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</p>			
TastEd	<p><b>Food</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 Focusing on: preparing ingredients hygienically and using appropriate utensils. Follow a recipe Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed Use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, and baking</p>	<p><b>Making</b> Select from and use a wide range of materials and components, including construction materials and ingredients and textiles, according to their characteristics. Cut materials safely using tools provided.</p>	<p>Substantive ingredients, yeast, dough, wholemeal, unleavened, baking soda, spice, herbs, carbohydrate, sugar, fat, protein, vitamins, nutrients, gluten, allergy, intolerance, savoury, seasonality, pour, mix, knead, whisk, beat, combine, fold, rubbing in</p>



NC coverage  
 Make  
 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  
 Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics  
 Cooking and nutrition  
 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.

## Year 6

	Substantive knowledge	Disciplinary knowledge and skills	Vocabulary   Tier 2 and 3
Summer Spotlight	<p>Understand how key events and individuals in DT have helped shape the world.</p> <p><b>Mechanics</b>            Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages            Understand that mechanical systems have an input, process and an output.            Understand how cams can be used to produce different types of movement and change the direction of movement.            Know and use technical vocabulary relevant to the project.</p> <p>Programing (through computing project)            Apply their understanding of computing to programme and control their products            Connect simple electrical components in a series circuit and program an interface to enhance the way the product works.            Investigate and analyse a range of powered products, including programmed, and evaluate their own products and design criteria.</p>	<p><b>Designing</b>            Generate innovative ideas by carrying out research using surveys, interviews, questionnaires and web-based resources.            Develop a simple design specification to guide their thinking.            Develop and communicate ideas through discussion, annotated drawings, exploded drawings and drawings from different views.</p> <p><b>Making</b>            Produce detailed lists of tools, equipment and materials. Formulate step-by-step plans and, if appropriate, allocate tasks within a team.            Select from and use a range of tools and equipment to make products that that are accurately assembled and well finished.            Work within the constraints of time, resources and cost</p> <p><b>Evaluating and improving</b>            Compare the final product to the original design specification.            Test products with the intended user, where safe and practical, and critically evaluate the quality of the</p>	<p><b>Disciplinary</b>            Design decisions, functionality, innovation, authentic, user, purpose, design specification, design brief</p> <p><b>Substantive</b>            Cam, snail cam, off-centre cam, peg cam, pear shaped cam, follower, axle, shaft, crank, handle, housing, framework, rotation, rotary motion, oscillating motion, reciprocating motion, mechanical system, input movement, process, output movement</p>



	Understand and use computing to program and control products with electrical systems	design, manufacture, functionality and fitness for purpose. Consider the views of others to improve their work. Investigate famous manufacturing and engineering companies relevant to the project.	
<p>NC coverage</p> <p><b>Design</b> Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups Generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design</p> <p><b>Make</b> Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</p> <p><b>Evaluate</b> Investigate and analyse a range of existing products Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work Understand how key events and individuals in design and technology have helped shape the world</p> <p><b>Technical knowledge</b> Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] Apply their understanding of computing to programme and control their products</p>			
STEM mornings	<p><b>Food</b> Use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking</p>	<p><b>Making</b> Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining) accurately</p>	<p>Substantive ingredients, yeast, dough, wholemeal, unleavened, baking soda, spice, herbs, carbohydrate, sugar, fat, protein, vitamins, nutrients, gluten, allergy, intolerance, savoury, seasonality</p>
<p>NC coverage</p> <p><b>Make</b> Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately Select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities</p> <p><b>Technical knowledge</b> Understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]</p>			
TastEd	<p><b>Food</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 Focusing on: preparing ingredients hygienically and using appropriate utensils. Follow a recipe</p>	<p><b>Making</b> Select from and use a wide range of materials and components, including construction materials and ingredients and textiles, according to their characteristics. Cut materials safely using tools provided.</p>	<p>Substantive ingredients, yeast, dough, wholemeal, unleavened, baking soda, spice, herbs, carbohydrate, sugar, fat, protein, vitamins, nutrients, gluten, allergy, intolerance, savoury, seasonality, pour, mix, knead, whisk, beat, combine, fold, rubbing in</p>



Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed Use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, and baking		
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NC coverage

Make

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

Select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics

Cooking and nutrition

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.