UNIVERSITY OF CAMBRIDGE PRIMARY SCHOOL

Design and Technology Progression Mapping

Nursery	Reception
Managing self 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 **Gross motor skills** Choose the right resources to carry out their own plan **Fine motor skills** Use one-handed tools and equipment Use a comfortable grip with good control when holding pens and pencils **The natural world** Explore how things work Explore and talk about forces they can feel **Creating with materials** 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	**Speaking** Use talk to help work out problems and organize thinking and activities explain how things work and why they might happen **Fine motor skills** 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. **Creating with materials** 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

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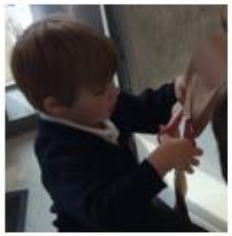
Reception | Introduction of skills



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

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

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

UNIVERSITY OF CAMBRIDGE PRIMARY SCHOOL

Year 1

	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. Mechanics Create products using wheels and axles Explore and use mechanisms in their products.	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	Disciplinary Design, ideas, choose, drawing, make, materials, tools, evaluate, improve Substantive Mechanism, lever, slider, slot, pivot, guide/bridge, pull/push, down, straight, cut, fold, join, fix,
NC coverage 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 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			
STEM mornings	Structures Build structures exploring how they can be stronger, stiffer and more stable	Making Select from and use a range of tools and equipment to perform practical tasks (for example joining and finishing.)	Substantive Straight, cut, fold, join, fix, weak, 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	Food Use the basic principles of a healthy and varied diet to prepare dishes. Understand where food comes from	Making Select from and use a wide range of materials and components, including construction materials and ingredients and textiles, according to their characteristics.	Substantive Fruit, vegetables, descriptive vocabulary, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients

	Use techniques such as cutting and peeling. Prepare simple dishes safely and hygienically, without using a heat source	Cut materials safely using tools provided.	
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. Structures Build structures exploring how they can be stronger, stiffer and more stable Use materials to practise drilling, screwing, gluing and nailing materials to make and strengthen products.	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 range of tools and equipment to perform practical tasks (for example joining and finishing.) 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. Measure and mark out to the nearest centimetre. Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen). Evaluating and improving Evaluate; explore and evaluate a range of existing products Evaluate their ideas and products against design criteria	Disciplinary Explore, evaluate, product, design, criteria, materials, tools, equipment, ingredients, template, mock up, improve Substantive structure, base, underneath, thicker, thinner, corner, point, straight, curved, rectangle, cube, cuboid, cylinder
NC coverage 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 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			
STEM mornings	Structures Build structures exploring how they can be stronger, stiffer and more stable	Making Select from and use a range of tools and equipment to perform practical tasks (for example joining and finishing.)	Substantive structure, base, underneath, thicker, thinner, corner, point, straight, curved, rectangle, cube, cuboid, cylinder
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	Food 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	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 Fruit, vegetables, descriptive vocabulary of taste and texture slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients, planning, tasting
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 3

	Substantive knowledge	Disciplinary knowledge and skills	Vocabulary | Tier 2 and 3
Summer Spotlight	Understand how key events and individuals in DT have helped shape the world. Textiles Select the most appropriate techniques to decorate textiles. Join textiles with a combination of stitching techniques (such as back stitch for seams and running stitch to attach decoration).	Designing Design purposeful, functional, appealing products for themselves and other users based on design criteria-refining design as work progresses.	Disciplinary User, purpose, design, model, evaluate, prototype, annotated sketch, functional, innovative, investigate, label, drawing, aesthetics, function, pattern

	Know how to strengthen, stiffen and reinforce existing fabrics. Understand how to securely join two pieces of fabric together. Understand the need for patterns and seam allowances.	Generate, develop, model and communicate their ideas through templates, mock-ups and, where appropriate, information and communication technology Making Select from and use a range of tools and equipment to perform practical tasks (for example joining and finishing.) 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. Measure and mark out to the nearest centimetre. Evaluating and improving Evaluate; explore and evaluate a range of existing products Evaluate their ideas and products against design criteria	pieces Substantive Fabric, names of fabrics, fastening, compartment, zip, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, seam, seam allowance
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			
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
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]			
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	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

	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		
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 4

	Substantive knowledge	Disciplinary knowledge and skills	Vocabulary | Tier 2 and 3
Summer Spotlight	Understand how key events and individuals in DT have helped shape the world. Mechanics 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 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 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.	Designing Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose Generate, develop, model and communicate their ideas through discussion, annotated sketches and prototypes Making Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining) accurately Select from and use a wider range of materials and components, including construction materials, ingredients, according to their functional properties and aesthetic qualities Cut materials accurately and safely by selecting appropriate tools. Measure and mark out to the nearest millimetre. Select appropriate joining techniques Evaluating and improving Investigate and analyse a range of existing products	Disciplinary Investigate, analyse, design criteria, purpose, user, market research generate, refine, annotated diagram, computer design, instructions, materials, tools, electrical components, construct, measure, test evaluate, strengths, improvement Substantive Pulley, drive belt, gear, rotation, spindle, driver, follower, ratio, transmit, axle, motor, movement, controlled, shell structure, corrugating, ribbing, laminating, 3D, net, marking out, scoring, shaping, tabs, adhesives, joining, assemble, accuracy, material, stiff, strong

	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.	Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work	
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] Apply their understanding of computing to programme and control their products Apply their understanding of how to strengthen, stiffen and reinforce more complex structures]			
STEM mornings	Mechanics 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	Making Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining) accurately	Substantive Mechanism, lever, linkage, pivot, slot, bridge, guide, linear, rotary, oscillating, reciprocating
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 mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]			
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	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

	Use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, and baking		
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 5

	Substantive knowledge	Disciplinary knowledge and skills	Vocabulary | Tier 2 and 3
Summer Spotlight	Understand how key events and individuals in DT have helped shape the world. Structures Use tools to accurately measure, mark out, cut, shape and join materials to make frameworks. Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Know how to use materials in a functional way. Combine materials to create useful characteristics. 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	Designing Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose Generate, develop, model and communicate their ideas through discussion, annotated sketches and prototypes Making Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining) accurately Select from and use a wider range of materials and components, including construction materials, ingredients, according to their functional properties and aesthetic qualities Cut materials accurately and safely by selecting appropriate tools. Select appropriate joining techniques Evaluating and improving Investigate and analyse a range of existing products	Disciplinary Investigate, analyse, user, purpose, design criteria, materials, tools, mechanical components, annotated sketch, prototype, evaluate, improvement, criteria, feedback Substantive Frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, structural strength, water resistant, non-biodegradable, durable, strong, absorbent, fragile, corrugating, ribbing, laminating

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		Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work	
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] Apply their understanding of computing to programme and control their products Apply their understanding of how to strengthen, stiffen and reinforce more complex structures]			
STEM mornings	Mechanics 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	Making Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining) accurately	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
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 mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]			
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 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

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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.

Year 6

	Substantive knowledge	Disciplinary knowledge and skills	Vocabulary | Tier 2 and 3
Summer Spotlight	Understand how key events and individuals in DT have helped shape the world. Electronics Understand and use electrical systems in their products. Understand the use of computer control systems in products. Apply their understanding of computing to program, monitor and control their products Structures Use tools to accurately measure, mark out, cut, shape and join materials to make frameworks. Apply their understanding of how to strengthen, stiffen and reinforce more complex structures Know how to use materials in a functional way. Combine materials to create useful characteristics. 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	Designing Use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose Generate, develop, model and communicate their ideas through discussion, annotated sketches and prototypes Making Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining) accurately Select from and use a wider range of materials and components, including construction materials, ingredients, according to their functional properties and aesthetic qualities Cut materials accurately and safely by selecting appropriate tools. Select appropriate joining techniques Evaluating and improving 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	Disciplinary Investigate, analyse, compare, purpose, user, annotated sketch, design specification, research, feedback, functional, innovative, annotated exploded diagrams, step by step plan, prototypes, drawbacks, alternative, amendments, critically evaluate test, quality, views drawbacks Substantive Reed switch, toggle switch, push-to-make switch, push-to-break switch, light dependent resistor (LDR), tilt switch light emitting diode (LED), bulb, bulb holder, battery, battery holder, USB cable, wire, insulator, conductor, crocodile clip,

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			Frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, structural strength
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 electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors]Apply their understanding of computing to programme and control their products Apply their understanding of how to strengthen, stiffen and reinforce more complex structures]			
STEM mornings	Food Use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, kneading and baking	Making Select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining) accurately	Substantive ingredients, yeast, dough, wholemeal, unleavened, baking soda, spice, herbs, carbohydrate, sugar, fat, protein, vitamins, nutrients, gluten, allergy, intolerance, savoury, seasonality
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 mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]			
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	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 ingredients, yeast, dough, wholemeal, unleavened, baking soda, spice, herbs, carbohydrate, sugar, fat, protein, vitamins, nutrients, gluten,

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	Use a range of techniques such as peeling, chopping, slicing, grating, mixing, spreading, and baking		allergy, intolerance, savoury, seasonality, pour, mix, knead, whisk, beat, combine, fold, rubbing in

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.