



Year	Knowledge	Skills	Vocabulary
1	<p>To design, make, evaluate and improve:</p> <p>Design products that have a clear purpose and an intended user.</p> <p>To take inspiration from design throughout history: Explore objects and designs to identify likes and dislikes of the designs. Suggest improvements to existing designs.</p>	<p>Mechanisms I can create products using levers and wheels.</p> <p>Construction I can use materials to practise drilling, screwing, gluing and nailing to make and strengthen products.</p> <p>Electricals & Electronics I can recognise if a battery-operated device works or not.</p> <p>Textiles/ Materials I can cut materials safely using tools provided. I can demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling). I can shape textiles using templates. I can colour and decorate textiles</p> <p>Food I can cut ingredients safely and hygienically. I can assemble or cook ingredients</p>	<p>investigating design, evaluate, make, user, purpose, ideas, product</p> <p>Food: fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients,</p> <p>Structures: cut, fold, join, fix structure, wall, tower, framework, weak, strong, base, top, underneath, side, edge, surface, thinner, thicker, corner, point, straight, curved, metal, wood, plastic circle, triangle, square, rectangle, cuboid, cube, cylinder</p> <p>Textiles: joining and finishing techniques, tools, fabrics and components, template, pattern pieces, mark out, join, decorate, finish</p> <p>Mechanisms slider, lever, pivot, slot, bridge/guide, card, masking tape, paper fastener, join, pull, push, up, down, straight, curve, forwards, backwards, 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>
2	<p>To design, make, evaluate and improve:</p>	<p>Mechanisms</p>	<p>investigating design, evaluate, make, user, purpose, ideas, product, user, purpose</p>

Design and Technology Curriculum Progression

<ul style="list-style-type: none"> • Make products, refining the design as work progresses. • Use software to design. <p>To take inspiration from design throughout history:</p> <ul style="list-style-type: none"> • Explore objects and designs to identify likes and dislikes of the designs. • Suggest improvements to existing designs. • Explore how products have been created. 	<p>I can use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears).</p> <p>Construction</p> <p>I can choose suitable techniques to construct products or to repair items.</p> <p>I can cut materials accurately and safely by selecting appropriate tools.</p> <p>I can select appropriate joining techniques.</p> <p>Electricals & electronics</p> <p>I can create series circuits.</p> <p>Textiles/ Materials</p> <p>I can understand the need for a seam allowance.</p> <p>I can join textiles with appropriate stitching</p> <p>Food</p> <p>I can prepare ingredients hygienically using appropriate utensils.</p> <p>I can measure accurately.</p> <p>I can follow a recipe.</p> <p>I can assemble or cook ingredients</p> <p>Computing</p> <p>I can control and monitor models using software designed for this purpose.</p>	<p>Food: fruit and vegetable names, names of equipment and utensils sensory vocabulary e.g. soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients</p> <p>Structures: cut, fold, join, fix structure, wall, tower, framework, weak, strong, base, top, underneath, side, edge, surface, thinner, thicker, corner, point, straight, curved, metal, wood, plastic circle, triangle, square, rectangle, cuboid, cube, cylinder</p> <p>Textiles: fabric, names of fabrics, fastening, compartment, zip, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, seam, seam allowance, wadding, reinforce, right side, wrong side, hem, template, pattern pieces, name of textiles and fastenings used, pins, needles, thread, pinking shears, fastenings</p> <p>Mechanisms</p> <p>slider, lever, pivot, slot, bridge/guide, card, masking tape, paper fastener, join, pull, push, up, down, straight, curve, forwards, backwards, 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>
---	--	---

<p>3</p>	<p>To design, make, evaluate and improve:</p> <ul style="list-style-type: none"> • Design with purpose by identifying opportunities to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, evaluating the end product design. <p>To take inspiration from design throughout history:</p> <ul style="list-style-type: none"> • Identify some of the great designers in all of the areas of study to generate ideas for designs. • Improve upon existing designs, giving reasons for choices. 	<p>Mechanisms I can use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears).</p> <p>Construction I can choose suitable techniques to construct products or to repair items. I can cut materials accurately and safely by selecting appropriate tools. I can select appropriate joining techniques.</p> <p>Electricals & electronics I can create series circuits.</p> <p>Textiles/ Materials I can understand the need for a seam allowance. I can join textiles with appropriate stitching</p> <p>Food I can prepare ingredients hygienically using appropriate utensils. I can measure accurately. I can follow a recipe. I can assemble or cook ingredients</p> <p>Computing I can control and monitor models using software designed for this purpose.</p>	<p>user, purpose, design, model, evaluate, prototype, annotated sketch, functional, innovative, investigate, label, drawing, function, planning, design criteria, annotated sketch, appealing</p> <p>Food: name of products, names of equipment, utensils, techniques and ingredients texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet</p> <p>Structures: 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, decision, frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent</p> <p>Textiles: fabric, names of fabrics, fastening, compartment, zip, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, seam, seam allowance, wadding, reinforce, right side, wrong side, hem, template, pattern pieces, name of textiles and fastenings used, pins, needles, thread, pinking shears, fastenings</p> <p>Electrical systems: series circuit, fault, connection, toggle switch, push-to-make switch, push-to-break switch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip, control, program, system, input device, output device, 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 control, program, system, input device, output device, series circuit, parallel circuit</p> <p>Mechanisms: mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output linear, rotary, oscillating, reciprocating, pulley, drive belt, gear, rotation, spindle, driver, follower, ratio, transmit, axle, motor, circuit, switch, circuit diagram, annotated drawings, exploded diagrams, mechanical system, electrical system, input, process, output</p>
----------	--	--	---

<p>4</p>	<p>To design, make, evaluate and improve:</p> <ul style="list-style-type: none"> • Design with purpose by identifying opportunities to design. • Make products by working efficiently • Refine work and techniques as work progresses, continually evaluating the product design. • Use software to design and represent product designs. <p>To take inspiration from design throughout history:</p> <ul style="list-style-type: none"> • Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for designs. • Disassemble products to understand how they work. 	<p>Mechanisms I can use scientific knowledge to choose appropriate mechanisms for a product.</p> <p>Construction I can strengthen materials using suitable techniques.</p> <p>Materials: I can measure and mark out to the nearest mm. I can apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs).</p> <p>Electricals & electronics I can create parallel circuits.</p> <p>Textiles/ Materials Materials: I can measure and mark out to the nearest mm. I can apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs).</p> <p>Textiles: I can select the most appropriate techniques to decorate textiles</p> <p>Food I can prepare ingredients hygienically using appropriate utensils. I can measure ingredients to the nearest gram.</p>	<p>evaluating, design brief design criteria, innovative, prototype, user, purpose, function, prototype, design criteria, innovative, appealing, design brief, planning, annotated sketch, sensory evaluations</p> <p>Food: name of products, names of equipment, utensils, techniques and ingredients texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury, hygienic, edible, grown, reared, caught, frozen, tinned, processed, seasonal, harvested healthy/varied diet</p> <p>Structures: 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, decision, frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent</p> <p>Textiles: fabric, names of fabrics, fastening, compartment, zip, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, seam, seam allowance, wadding, reinforce, right side, wrong side, hem, template, pattern pieces, name of textiles and fastenings used, pins, needles, thread, pinking shears, fastenings</p> <p>Mechanisms: mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output linear, rotary, oscillating, reciprocating, pulley, drive belt, gear, rotation, spindle, driver, follower, ratio, transmit, axle, motor, circuit, switch, circuit diagram, annotated drawings, exploded diagrams, mechanical system, electrical system, input, process, output</p> <p>Electrical systems: series circuit, fault, connection, toggle switch, push-to-make switch, push-to-break switch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip, control, program, system, input device, output device, 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 control, program, system, input device, output device, series circuit, parallel circuit</p>
----------	---	--	---

		<p>I can assemble and cook ingredients (controlling the temperature of the oven or hob, if cooking).</p> <p>Computing</p> <p>I can control and monitor models using software designed for this purpose.</p>	
5	<p>To design, make, evaluate and improve:</p> <ul style="list-style-type: none"> • Design with the user in mind, motivated by the service a product will offer. • Make products through stages of prototypes, making continual refinements. • Ensure products have a high-quality finish, using art skills where appropriate. <p>To take inspiration from design throughout history:</p> <ul style="list-style-type: none"> • Combine elements of design from a range of inspirational designers throughout history. • Create innovative designs that improve upon existing products. 	<p>Mechanisms</p> <p>I can convert rotary motion to linear using cams.</p> <p>Construction</p> <p>I can develop a range of practical skills to create products (e.g. cutting, drilling and screwing, nailing, gluing, filling and sanding).</p> <p>Materials:</p> <p>I can cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape).</p> <p>Electricals & electronics</p> <p>I can create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips).</p> <p>Textiles/ Materials</p> <p>Materials:</p> <p>I can cut materials with precision and refine the finish with appropriate tools</p> <p>Textiles:</p>	<p>design decisions, functionality, authentic, user, purpose, design specification, design brief, innovative, research, evaluate, design criteria, annotate, evaluate, mock-up, prototype</p> <p>Food: ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble</p> <p>Structures: 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, decision, frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent</p> <p>Textiles: fabric, names of fabrics, fastening, compartment, zip, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, seam, seam allowance, wadding, reinforce, right side, wrong side, hem, template, pattern pieces, name of textiles and fastenings used, pins, needles, thread, pinking shears, fastenings</p> <p>Mechanisms: mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output linear, rotary, oscillating, reciprocating, pulley, drive belt, gear, rotation, spindle, driver, follower, ratio, transmit, axle, motor, circuit, switch, circuit diagram, annotated drawings, exploded diagrams, mechanical system, electrical system, input, process, output</p> <p>Electrical systems: series circuit, fault, connection, toggle switch, push-to-make switch, push-to-break switch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip, control, program, system, input device, output device, 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 control, program, system, input device, output device, series circuit, parallel circuit</p>

		<p>I can create objects (such as a cushion) that employ a seam allowance.</p> <p>I can join textiles with a combination of stitching techniques (e.g. back stitch for seams and running stitch to attach decoration).</p> <p>Food</p> <p>I can understand the importance of correct storage and handling of ingredients (knowledge of micro-organisms).</p> <p>I can demonstrate a range of baking and cooking techniques.</p> <p>Computing:</p> <p>I can write code to control and monitor models or products.</p>	
6	<p>To design, make, evaluate and improve:</p> <ul style="list-style-type: none"> • Design with the user in mind, motivated by the service a product will offer (rather than simply for profit). • Use prototypes, cross-sectional diagrams and computer aided designs to represent designs. <p>To take inspiration from design throughout history:</p>	<p>Mechanisms</p> <p>I can use innovative combinations of electronics (or computing) and mechanics in product designs</p> <p>Construction</p> <p>I can develop a range of practical skills to create products.</p> <p>Electricals & electronics</p> <p>I can create circuits using electronics kits that employ a number of components with increasing confidence.</p> <p>Textiles/ Materials</p>	<p>function, innovative, design specification, design brief, user, purpose design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional, mock-up, prototype</p> <p>Food: ingredients, yeast, dough, bran, flour, wholemeal, unleavened, baking soda, spice, herbs fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, gluten, dairy, allergy, intolerance, savoury, source, seasonality utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble</p> <p>Structures: 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, decision, frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent</p> <p>Textiles: fabric, names of fabrics, fastening, compartment, zip, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, seam, seam allowance, wadding, reinforce, right side, wrong side, hem, template, pattern pieces, name of textiles and fastenings used, pins, needles, thread, pinking shears, fastenings</p>

	<ul style="list-style-type: none"> • Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. • Evaluate the design of products to suggest improvements to the user experience. 	<p>Materials: I can show an understanding of the qualities of materials to choose appropriate tools to cut and shape</p> <p>Textiles: I can use the qualities of materials to create visual and tactile effects in the decoration of textiles (such as a soft decoration for comfort on a cushion).</p> <p>Food I can measure accurately and calculate ratios of ingredients to scale up or down from recipe. I can create and refine recipes, including ingredients, methods, cooking times and temperatures.</p> <p>Computing I can write code to control and monitor models or products.</p>	<p>Mechanisms: mechanism, lever, linkage, pivot, slot, bridge, guide system, input, process, output linear, rotary, oscillating, reciprocating, pulley, drive belt, gear, rotation, spindle, driver, follower, ratio, transmit, axle, motor, circuit, switch, circuit diagram, annotated drawings, exploded diagrams, mechanical system, electrical system, input, process, output</p> <p>Electrical systems: series circuit, fault, connection, toggle switch, push-to-make switch, push-to-break switch, battery, battery holder, bulb, bulb holder, wire, insulator, conductor, crocodile clip, control, program, system, input device, output device, 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 control, program, system, input device, output device, series circuit, parallel circuit</p>
--	---	---	---