Design and Technology
Skills Progression

YEAR 1	
National Curriculum:	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 Cooking and nutrition • use the basic principles of a healthy and varied diet to prepare dishes • understand where food comes from
Vocabulary:	**Food:** cut, spread, stir, mix, hygiene, healthy, fruit, vegetable, energy, measure, cup, spoon, knife, farm **Mechanisms:** Levers, sliders, push, pull, left, right, up, down, tool, scissors, glue, paper, split-pin, fasten, move, toy, plan, design, make, ideas, strengths, weaknesses, safely **Textiles:** felt, running stitch, needle, thread, fabric, loop, ribbon, front, back, pattern

YEAR 2	
National Curriculum:	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
Vocabulary:	**Structures:** stiffer, stronger, more stable **Constructions:** wheel, axle, doweling, vehicle, hacksaw, bench hook, measure, mark, accurate, features, wood, construction, splinter, sandpaper **Mechanisms:** Pivots, joint, evaluate, materials, movement, purpose, product, sideways, upwards, downwards

YEAR 3	
National Curriculum:	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 • apply their understanding of how to strengthen, stiffen and reinforce more complex structures 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
Vocabulary:	**Food:** slice, peeling, assemble, combine, serve, portion, garnish, grate, shred, balanced diet, vitamins, minerals, fat, protein, carbohydrate, sugar, lifestyle, ingredients, recipe, source (farm to fork), import, export, transported **Structures:** layer, mould, papier-mâché, harden, manipulate, core, base, adhesive **Textiles:** weave, woven, over, under, pulp, squash, fibres, fuse, compress, squeeze

YEAR 4	
National Curriculum:	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] 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
Vocabulary:	**Electricity:** circuit, bulb, bulb holder, buzzer, simple circuit, complete, broken, current, pressure pad, electricity, crocodile clips **Food:** savoury, sweet, preserve, additives, fibre, hydrated, blending, juicing, combine, techniques **Construction:** shaft, linkages, mechanism, dowel, pneumatics, tension, joiners, projection, release, perpendicular, elastic band, groove, millimetre

YEAR 5	
National Curriculum:	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 • apply their understanding of how to strengthen, stiffen and reinforce more complex structures • understand and use mechanical systems in their products [for example, gears, pulleys, cams, pneumatics, levers and linkages]
Vocabulary:	**Mechanisms:** syringe, pneumatics, tube, air flow, pressure, inflate, deflate **Textiles:** cross stitch, back stitch, embroider, applique, pattern, cotton, embroidery thread, unpick
	Structures: cross-bracing, shock resistant, framework, modifying, reinforce, adaptations, triangulation, foundations, top-heavy, weight distribution

YEAR 6	
National Curriculum:	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 • apply their understanding of how to strengthen, stiffen and reinforce more complex structures • understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] 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

Vocabulary:	**Electricity:** switches, copper wire, electrical tape, freestanding **Structures:** timber, beam, symmetry, overlap, support, scaffold, authentic, inverted weight distribution **Food:** ingredients, grown, reared, caught and processed, cultural, traditional, affordable, social influences, veganism/ vegetarian, nutrition, ethical sources, calories, fibre, nutrition, responsibly sourced, fairtrade