Design and Technology Knowledge

Year 3	Year 4	Year 5	Year 6
Design, Make, Evaluate			
Key vocabulary	Key vocabulary	Key vocabulary	Key vocabulary
User, purpose, design, model, evaluate, prototype, annotated sketch, functional, innovative, investigate, label, drawing, function, planning, design criteria, annotated sketch, appealing	evaluating, design brief design criteria, innovative, prototype, user, purpose, function, prototype, design criteria, innovative, appealing , planning, annotated sketch	design decisions, functionality, authentic, purpose, , design brief, innovative, research, evaluate, design criteria, annotate, evaluate, mock-up, prototype	function, innovative, design specification, design brief, , design brief, design specification, prototype, annotated sketch, purpose, user, innovation, research, functional
Cooking and nutrition			
Know about a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught. Understand which equipment and utensils can prepare and combine food.	Understand a range of fresh and processed ingredients appropriate for their product, and whether they are grown, reared or caught Understand that food is grown (such as tomatoes, wheat and potatoes), reared (such as pigs, chickens and cattle) and caught (such as fish) in the UK, Europe and the wider world Know the importance of, and be able to, recycle food-related waste Begin to be able to read and understand food labels.	Understand about seasonality in relation to food products and the source Know the importance of, and be able to, recycle food-related waste Know an increasingly extensive range of ingredients and how these are grown (eg beans, pulses, tropical fruits, vegetables) Understand how food is stored correctly	Understand about seasonality in relation to food products and the source of different food products. Understand social influences on the food we choose to eat (eg media, peer pressure, ethics) Understand some of the ethical dilemmas associated with the food people choose to buy/ eat Begin to understand food processing

Key vocabulary	Key vocabulary	Key vocabulary	Key vocabulary
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	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	ingredients, yeast, dough, flour, wholemeal, yeast, 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	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
Structures			
Understand the simple properties of materials Understand how to make strong structures Understand simple joining techniques (sticking)	Learn about nets of cubes/ cuboids and where appropriate more complex shapes	Learn techniques to reinforce and strengthen a 3D frame how freestanding structures can be made stronger, stiffer and more stable	Learn that materials have both functional properties and aesthetic qualities Learn about stable structures that are fit for purpose.
Key vocabulary	Key vocabulary	Key vocabulary	Key vocabulary
shell structure, three-dimensional (3-D) shape, net, cube, cuboid, prism, vertex, edge, face, length, width, marking out, scoring, shaping, tabs, adhesives, joining, assemble, accuracy, material, stiff, reduce, reuse, recycle, , decision,		Frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent, , breadth, capacity	
Textiles			

Understand that a 3-D textiles product can be assembled from two identical fabric shapes Understand basic stitching - blanket stitch, over stitch Understand the need for patterns and seam allowances.		Understand that a single fabric shape can be used to make a 3D textiles product Understand how fabrics can be strengthened, stiffened and reinforced where appropriate Understand that pattern pieces, fabric shapes and different fabric can be combined	
Key vocabulary	Key vocabulary	Key vocabulary	Key vocabulary
fabric, names of fabrics, fastening, compartment, zip, button, structure, finishing technique, strength, weakness, stiffening, templates, stitch, seam, seam allowance		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,	
Mechanisms/mechanical systems			
Understand bout the movement of simple mechanisms such as levers, sliders, wheels and axles Distinguish between fixed and freely moving axles.		How mechanical and electrical systems have an input, process and output how mechanical systems such as levers and linkages or pneumatic systems create movement	
Key vocabulary	Key vocabulary	Key vocabulary	Key vocabulary
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	
Electrical systems			

Understand that electrical systems have an input, process and output	How electrical systems can be used in products [for example, series circuits)	How simple electrical circuits and components can be used to create functional products	How more complex electrical circuits and components can be used to create functional products How to program a computer to monitor changes in the environment and control their products
Key vocabulary	Key vocabulary	Key vocabulary	Key vocabulary
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		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	
Key events and individuals			
Across KS2 pupils should know about inventors, designers, engineers, chefs and manufacturers who have developed ground-breaking products			