DT Keys - Skills

	Year 2	Year 3	Year 4	Year 5	Year 6
Developing, planning and communicating ideas	• Generate ideas by drawing on their own and other people's experiences • Develop ideas through discussion	• Generate ideas by considering the purpose and user/s • Identify a purpose and criteria for a successful product • Plan the order of their work • Explore, develop and communicate design proposals by modelling ideas • Make drawings when designing, which include labels	• Generate ideas considering the purposes for which they are designing • Make labelled drawings, showing specific features from different views • Devise a clear plan of the order of their work, planning how to use materials, equipment and processes, and suggest alternative methods of making should the first attempts fail • Evaluate products and identify criteria that can be used for their own designs	• Generate ideas through discussion and identify a purpose for their product • Create a specification for their design • Devise a clear plan of the order of their work, planning how to use materials, equipment and processes, and suggest alternative methods of making should the first attempts fail • Use results of investigations, information sources, including ICT to develop design idea	• Communicate their ideas through detailed labelled drawings • Develop a design specification • Explore, develop and communicate aspects of their design proposals by modelling their ideas in a variety of ways • Plan the order of their work, choosing appropriate materials, tools and technique

	Year 2	Year 3	Year 4	Year 5	Year 6
Working with tools, equipment, materials and components to make a high-quality product	• Begin to select tools and materials; use vocab' to name and describe them • Measure, cut and score with some accuracy • Use hand tools safely and appropriately • Assemble, join and combine materials in order to make a product • Cut, shape and join fabric to make a simple garment using basic sewing techniques • Follow safe procedures for food safety and hygiene • Choose and use appropriate finishing techniques	Select tools and techniques for making their product • Measure, mark out, cut, score and assemble components with greater accuracy • Work safely and accurately with a range of simple tools • Consider their ideas as they make progress and be willing to make changes to improve their work • Measure, tape or pin, cut and join fabric with some accuracy • Demonstrate hygienic food preparation and storage • Use finishing techniques to strengthen and improve the appearance of their product using a range of equipment (including ICT where appropriate)	• Select appropriate tools and techniques for making their product • Measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques • Join and combine materials and components accurately in both temporary and permanent ways • Sew using a range of different stitches, weaving and knitting • Measure, tape or pin, cut and join fabric with some accuracy • Use simple graphical communication techniques	• Select appropriate materials, tools and techniques • Measure and mark out accurately • Use skills in using different tools and equipment safely and accurately • Weigh and measure accurately (time, dry ingredients, liquids) • Apply the rules for basic food hygiene and other safe practices e.g. hazards relating to the use of ovens • Cut and join with accuracy to ensure a good-quality finish to the product	• Select appropriate tools, materials, components and techniques • Assemble components to make working models • Use tools safely and accurately • Construct products using permanent joining techniques • Make modifications during the making process • Pin, sew and stitch materials together to create a product • Achieve a quality product

	Year 2	Year 3	Year 4	Year 5	Year 6
Evaluating Processes and products	• Evaluate their product against their design criteria • Evaluate their products as they are developed, identifying strengths and possible changes they might make • Talk about their ideas, saying what they like and dislike about them	• Evaluate their product against their original design criteria e.g. how well it meets its intended purpose • Disassemble and evaluate familiar products	• Evaluate their work both during and at the end of the assignment • Evaluate their products carrying out appropriate tests	• Evaluate a product against the original design specification • Evaluate their product independently and with others	• Evaluate their products, identifying strengths and areas for development, and carrying out appropriate tests • Record their evaluations using drawings with labels • Evaluate their product against their original criteria, suggesting ways in which their product could be improved

DT Keys - Knowledge and Vocabulary

	Year 2	Year 3	Year 4	Year 5	Year 6
Food	• Understand where a range of food comes from e.g. farmed or homegrown fruit and vegetables • Understand basic principles of a balanced healthy diet to prepare dishes • Know and use technical and sensory vocabulary relevant to their project	• Know how to use appropriate equipment and utensils to prepare and combine food. • Know about a range of fresh and processed ingredients appropriate for their product, and whether these are grown, reared or caught. • Know and use relevant technical and sensory vocabulary appropriately.		• Know how to use utensils and equipment, including heat sources, to prepare and cook food. • Understand about seasonality in relation to food products • Identify the source of different food products. • Know and use relevant technical and sensory vocabulary.	
Vocabulary	fruit and vegetable names, names of the equipment used, appropriate sensory vocabulary	product names, equipment names, 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, 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	

	Year 2	Year 3	Year 4	Year 5	Year 6
Structures	• Know how to make freestanding structures stronger, stiffer and thus more stable. • Know and use technical vocabulary relevant to the project		• 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.		• Understand how to strengthen, stiffen and reinforce 3-D frameworks. • Know and use technical vocabulary relevant to the project.
Vocabulary	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		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

	Year 2	Year 3	Year 4	Year 5	Year 6
Electrical Systems		• Understand and use electrical systems in their products linked to science coverage • Apply their understanding of computing to program and control their products • Know and use technical vocabulary relevant to the project.		• Understand and use electrical systems in their products linked to science coverage • Apply their understanding of computing to program, monitor and control their products • Know and use technical vocabulary relevant to the project	
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		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	

	Year 2	Year 3	Year 4	Year 5	Year 6
Textiles	• Understand how simple 3-D textile products are made, using a template to create two identical shapes • Understand how to join fabrics using different techniques e.g. running stitch, glue, over stitch, stapling • Explore different finishing techniques • Know and use technical vocabulary relevant to the project	• 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 • Know and use technical vocabulary relevant to the project		• Produce a 3-D textile product from a combination of accurately made pattern pieces, fabric shapes and different fabrics. • Understand how fabrics can be strengthened, stiffened and reinforced where appropriate. • Know and use technical vocabulary relevant to the project	
Vocabulary	joining and finishing techniques, tools, fabrics and components, template, pattern pieces, mark out, join, decorate, finish	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,	

	Year 2	Year 3	Year 4	Year 5	Year 6
Mechanisms/ mechanical systems	• Explore and use wheels, axles and axle holders • Distinguish between fixed and freely moving axles • Know and use technical vocabulary relevant to the project	• Understand and use lever and linkage mechanisms • Distinguish between fixed and loose pivots • Know and use technical vocabulary relevant to the project.		• Understand that mechanical and electrical systems have an input, process and an output • Understand how gears and pulleys can be used to speed up, slow down or change the direction of movement. Know and use technical vocabulary relevant to the project	
Vocabulary	vehicle, wheel, axle, axle holder, chassis, body, cab assembling, cutting, joining, shaping, finishing, fixed, free, moving, mechanism names of tools, equipment and materials used	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	