Design Technology

Design	Make	Evaluate	Technical Knowledge	Vocabulary
Technologists design products to fulfil design criteria.	Technologists use a variety of tools and methods to accurately make a product.	Technologists accurately evaluate the strengths and weaknesses of their own and others' products.	Technologists use wider technical knowledge to inform the design, make and evaluate process.	Technologists use appropriate subject-specific vocabulary.

	Design	Make	Evaluate	Technical Knowledge	Vocabulary
N	→Explore different materials freely; to develop their ideas about how to use them and what to make. →Develop their own ideas and then decide which materials to use to express them.	→Make imaginative and complex 'small worlds' with blocks and construction kits, such as a city with different buildings and a park. →Join different materials and explore different textures.	→	→	→make, create, words linked to materials eg wood, paper, words linked to tools eg scissors, glue
Rec	→	→Create collaboratively, sharing ideas, resources and skills.	→Return to and build on their previous learning, refining ideas and developing their ability to represent them.	→	→plan, make, material, words linked to materials eg wood, paper, words linked to tools eg scissors, glue
Year 1	→Select and explain their choice of materials, sometimes with help. →Draw a simple picture of an intended design with basic labelling.	→Select and explain why they have used a particular tool for a task. →Cut shapes from a range of fabrics and papers. →Fold, tear, roll and cut paper and card. →Cut accurately and safely with scissors. →Join appropriately using glue or tape. →Build simple structures. →Measure and weigh food items using non-standard measures (e.g. spoons and cups). →With help, put ideas into practice.	→Describe others' work, including work by professional craftspeople and designers, and say what they like and dislike about it. →Describe how an existing product works (e.g. 'the toy moves when I turn the handle'). →Talk about their own and others' work identifying strengths or weaknesses.	→Explain how to keep safe during a practical task. →Identify the main food groups, including fruit and vegetables. →Identify the source for common foods.	→planning, investigating, design, evaluate, make, user, purpose, ideas, product →fruit and veg names, utensil names, soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard, flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients →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 →template, pattern pieces, mark out, join, decorate, finish →slider, lever, pivot, slot, bridge/guide, card, masking tape, paper fastener, join, pull, push, up, down, straight, curve, forwards, backwards
Year 2	→Choose appropriate materials and suggest ways of manipulating them to achieve a desired effect. →Produce detailed, labelled drawings, templates, mock-ups and models of products based on design criteria. →Use ICT packages to create a labelled design or plan.	→Cut, measure, form and shape materials. →Join fabrics, eg using running stitch, glue, staples, oversewing and tape. →Attach features to a vehicle (e.g. an axle and wheels or a sail and rudder). Join appropriately, with glue and/or tape, for different materials and situations. →Improve structures by making them stronger, stiffer or more stable. →Create and use wheels and axles. →Cut, peel, grate and chop a range of ingredients to make dishes from other countries. →Use the basic principles of a healthy and varied diet to prepare dishes.	→Investigate a range of existing products and say if they do what they are supposed to do. →Explain how finished products meet their design criteria and say what they could do better in the future.	→Work safely and hygienically in construction and cooking activities. →Explain where the food they eat comes from (e.g. by referring to countries, counties, animals and plants.) →Describe why a designer, building or design is important.	→planning, investigating, design, evaluate, make, user, purpose, ideas, product, design criteria, function →fruit and veg names, utensil names, chopping board, knife names, soft, juicy, crunchy, sweet, sticky, smooth, sharp, crisp, sour, hard, flesh, skin, seed, pip, core, slicing, peeling, cutting, squeezing, healthy diet, choosing, ingredients →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 →template, pattern pieces, mark out, join, decorate, finish →vehicle, wheel, axle, axle holder, chassis, body, cab, assembling, cutting, joining, shaping, finishing, fixed, free moving, mechanism, names of tools, equipment and materials used
Year 3	→Plan which materials will be needed for a task and explain why. →Create a simple pattern for a design. →Share ideas through words, labelled sketches and models, recognising that designs have to meet a range of needs, including being fit for purpose. →Make realistic plans, identifying processes, equipment and materials needed.	→Select the appropriate tools and explain choices. →Cut slots in cards and create nets. →Join fabrics using a running stitch. →Combine a variety of ingredients, using a range of cooking techniques.	→Investigate the design features (including identifying components or ingredients) of familiar existing products. →Suggest improvements to products make and describe how to implement them (taking the views of others into account).	→Follow health and safety rules for cooking and baking activities. →Describe what a balanced diet is. →Identify food which comes from the UK and other countries in the world. →Explain the impact of a design or designer on design history and how this has helped to shape the world.	→user, purpose, design, model, evaluate, prototype, annotated sketch, functional, innovative, investigate, label, drawing, function, planning, design criteria, appeal →names of products, equipment, utensils, techniques, ingredients, texture, taste, sweet, sour, hot, spicy, appearance, smell, preference, greasy, moist, cook, fresh, savoury →shell, structure, 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
Year 4	→Choose from a range of materials, showing an understanding of their different characteristics. →Collect information from a number of different sources and use this information to inform design ideas in words, labelled sketches, diagrams and models, keeping in mind fitness for purpose and the end user. →Use ICT packages to create alternatives for an initial design. →Make realistic; step-by-step plans, reflecting on designs as the product develops.	→Analyse the potential of a range of tools and use them with accuracy. →Use more complex pop-ups. →Prototype and build frame and shell structures, showing awareness of how to strengthen, stiffen and reinforce. →Use pulleys, levers and linkages in their products. →Build models incorporating circuits with buzzers, bulbs and motors. →Measure and weigh ingredients appropriately to prepare and cook a range of savoury dishes.	→Explain how an existing product is useful to the user. →Identify what has worked well and what could be improved, evidencing and explaining the results of research.	→Follow health and safety rules when working with materials and substances. →Describe how a product could be made better, stronger or more sustainable. →Make healthy eating choices and explain why.	→evaluate, design brief, design criteria, innovative, prototype, user, purpose, function, appeal, sensory evaluation →names of products, equipment, utensils, techniques, 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, varied diet →shell, structure, 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 →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
Year 5	→Use various sources of information, clarifying/sharing ideas through discussion, labelled sketches, cross-sectional diagrams and modelling, recognising that ideas have to meet a range of needs. →Work from own detailed plans, modifying them where appropriate.	→Select and combine materials with precision. →Create a 3D product using a range of materials. →Combine materials with temporary or fixed joints. →Cut safely and accurately to a marked line. →Use a glue gun with close supervision. →Build a framework using a range of materials (e.g. wood, card and corrugated plastic) to support mechanisms. →Use cams, gears, pulleys, levers and linkages in their products. →Build models, incorporating switches to turn on and off. →Monitor and control more than one output, in response to changes. →Combine food ingredients appropriately (e.g. kneading, rubbing in and mixing). →Apply understanding of computing to program, monitor and control products.	→Investigate the design features (including identifying components or ingredients) of a familiar existing product in the context of the culture or society in which it was designed or made. →Test and evaluate products against a detailed design specification and make adaptations as they develop the product.	→Research the work done by textile artists and say what they like about a piece, identifying the techniques and materials used in creating it and the aesthetic value.	→design decisions, functionality, authenticity, user, purpose, design specification, innovate, research, annotate, evaluate, mock-up, prototype →ingredients, yeast, dough, flour, wholemeal, unleavened, baking soda, spice, herbs, fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble →frame, structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent →seam, seam allowance, wadding, reinforce, right side, wrong side, hem, template, pattern pieces, names of textiles and fastenings used, pins, needles, thread, pinking shears, fastenings →pulley, drive belt, gear, rotation, spinle, driver, follower, ratio, transmit, axle, motor, circuit, switch, circuit diagram, annotated drawing, exploded diagram, mechanical system, electrical system, input, process, output
Year 6	→Choose the best materials for a task, showing an understanding of their working characteristics. →Select the most appropriate materials and frameworks for different structures, explaining what makes them strong. →Use research to inform design criteria. →Develop detailed criteria for designs for products aimed at particular individuals or groups, sharing ideas through cross-sectional and exploded diagrams, prototypes and pattern pieces.	→Use more complex tools with increasing accuracy. →Combine fabrics to create more useful properties and make a product of high quality, checking for snags and glitches. →Join materials, using the most appropriate method for the materials or purpose. →Use appropriate tools and equipment, weighing and measuring with scales.	→Demonstrate modifications made to a product, as a result of ongoing evaluation, by themselves and others. →Explain the form and function of familiar existing products.	→Demonstrate how their products take into account the safety of the user. →Plan how they can have a healthy/affordable diet. →Explain how ingredients were grown, reared, caught and processed. →Demonstrate an understanding of food seasonality. →Describe how an individual in the field of design and technology has helped shape the world.	→function, innovate, design specification, user, purpose prototype, annotated sketch, research, function, mock-up, prototype →ingredients, yeast, dough, flour, wholemeal, unleavened, baking soda, spice, herbs, fat, sugar, carbohydrate, protein, vitamins, nutrients, nutrition, healthy, varied, utensils, combine, fold, knead, stir, pour, mix, rubbing in, whisk, beat, roll out, shape, sprinkle, crumble, gluten, dairy, allergy, intolerance, savoury, source, seasonality →frame, structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent

Design Technology

→Check work as it develops and modify their approach in light of progress.				→seam, seam allowance, wadding, reinforce, right side, wrong side, hem, template, pattern pieces, names of textiles and fastenings used, pins, needles, thread, pinking shears, fastenings