

EYFS DT	Developing Planning and Communicating ideas	Working with tools, equipment, materials and components including food	Evaluating processes and products
Vocabulary	Safety, tools, construction, function, materials, scissors, cut, materials, join, process,		
Tier 2	Select communicate equipment appropriate manage		
Knowledge including knowledge of how	Select appropriate resources before working Explore a range of materials Choose tools, materials and equipment to use before constructing Use ideas from the experience, wider world, imagination and stories to come up with a product idea Communicate what they are going to make and have a purpose in mind for making	Knows how to handle tools safely Knows how to store tools safely Know how to transport tools safely Knows the importance of a variety of food for a healthy diet Uses one handed tools and equipment e.g. makes snips in paper with child safety scissors Use simple tools to effect changes in materials Use simple tools and techniques competently Handles tools, objects, construction and malleable materials safely and with increasing control Make toys work by pressing parts or lifting flaps to achieve effects Consider and manage some risks Practice some safety measures without direct supervision Mix media to create new effects Use tools and techniques to shape, assemble and join materials they are using Explore a variety of materials, tools and techniques experimenting with design, form and function Build and construct with a wide range of objects, selecting appropriate resources Consider and manage some risks Practice some safety measures without direct supervision	Use what they have learned about materials and think about their uses and purposes Say what they like about the products they have constructed Share creations and explain the processes used
Equipment	Scissors, card, paper, tape, glue, variety materials including fabric, boxes, ipads		
Skills (End Points)	(Planning) Select tools, materials and equipment they want to use (Communicating) Communicate what they are going to make (Working with tools) Use age appropriate tools safely to shape, build, construct assemble and join materials (Food) Uses child friendly equipment safely and manage personal hygiene (Evaluating) Talk about their product saying what they like about it		

Year 1 DT	Developing Planning and Communicating ideas	Working with tools, equipment, materials and components including food	Evaluating processes and products
Vocabulary	Research, products, purpose, materials, evaluate, slice, peel, grate, hygiene, structure,		
Tier 2 Vocabulary	Explore range design specific criteria communicate discussion combining ensuring create appropriate source stating strengths		
Knowledge including knowledge of how	How to conduct research from computers, magazines and books Draw on their own experience to generate ideas (FS) Plan ideas by suggesting what to do next Model their ideas in card and paper Make design choices by exploring a range of materials Develop their design ideas applying findings from their earlier research Work confidently within a range of contexts e.g. imaginary, story based, home, school (FS) Communicate ideas and explain what they are going to do Identify a target group for what they intend to design and make	How to measure using nonstandard units of length How to use and carry scissors safely (FS) Know different types of adhesive Make their design using appropriate techniques (FS) With help, measure, mark out, cut and shape a range of materials Use tools safely e.g. scissors, hole punch (FS) Assemble, combine and join materials and components together using a range of adhesives e.g. glue, masking tape Ensure products are finished to improve the appearance Make free standing structures stringer , stiffer and more stable (FS) Basic food hygiene Where food comes from (plants or animals) That food has to be farmed or grown elsewhere How to use cooking utensils safely Everyone should have five fruit/vegetables a day (FS) Know the difference between fruit and vegetable Select and use appropriate fruit and vegetables and processes and tools to create a simple meal without using a heat source Use techniques such as cutting, peeling, grating Use basic food hygiene practices	Know what an evaluation is and how to conduct a basic evaluation Evaluate product through discussion, identifying how well it worked in relation to its purpose (FS) Evaluate products as they are developed identifying strengths and possible changes, Evaluate product by asking questions about what they have already made and how they have gone about it Explore: What products are, who products are for and how products work. Say what they like and dislike about products
Equipment	Scissors, card, paper, tape, glue, variety materials including fabric, boxes, safety knives, chopping boards, peelers, graters, hole punch		
Skills (End Points)	(Planning) Explore a range of resources to make design choices for a specific criteria (Communicating) Communicate what they will make and who it will be for through discussion (Working with tools) Use tools safely to assemble, combine and join materials ensuring products are finished (Food) Create a simple meal with no heat source using appropriate tools (Evaluating) Talk about their product stating strengths and possible changes they could make		

Year 2 DT	Developing Planning and Communicating ideas	Working with tools, equipment, materials and components including food	Evaluating processes and products
Vocabulary	Score, observation, centimeters, meters, axel, klever, mechanism, sliders, wheels, sensory characteristics,		
Tier 2	Knowledge wider criteria suitable specific state suitable intended increasing accuracy strength create combine improve identify		
Knowledge including knowledge of how	Of computer based presentation sysytems e.g. simple power-point, paint, ipad apps to draw with, How to communicate ideas effectively Generate ideas by drawing on other's and own experiences as well as knowledge of existing products (Y1) Identify a purpose for what they intend to design and make and describe what their products are for (Y1) Identify a simple design criteria Make simple drawings and label parts (Y1) Work confidently within a range of contexts, imaginary, narrative based, home, school, play parks, local community, industry and the wider environment (Y1) Develop and communicate design ideas through discussion, observation, drawing and modelling (Y1) Say how they will make their products suitable for intended users Use ICT where appropriate to develop and communicate their ideas	Know the names of all tools to be used How to use hand tools safely and appropriately (Y1) About simple working characteristics of materials and components About the movement of simple mechanisms such as axels and levers, sliders, wheels Select tools with increasing independence and explain their choices Select materials with increasing independence and explain their choices Measure using standard units of length, cut and score with some accuracy (Y1) Assemble, combine and join materials in order to make a product (Y1) Cut, shape and join fabric to make a simple garment Use basic sewing techniques Choose and use appropriate finishing techniques (Y1) Use a range of materials inc construction materials and kits, textiles, food ingredients and mechanical components Support freestanding structures so they are stronger and sturdy (Y1) Where their food comes from (Y1) Name of five food groups on the eat well plate (Y1) How to prepare simple dishes with no heat source (Y1) How to prepare a simple meal hygienically (Y1) Combine food ingredients based on their sensory characteristics	Evaluate against their design criteria Evaluate their products as they are developed, identifying strengths and areas for improvement (Y1) Talk about their own ideas saying what they like and dislike (Y1) Explore: What products are, who products are for, what products are for, how products work, how products are used, where products might be used, what materials products are made from (Y1)
Equipment	Tape measure, ruler, metre stick, scissors, card, boxes, variety materials including fabric, food, ICT, food, cutting boards, knives, peelers, adhesives, needles, material, dowels		
Skills (End Points)	(Planning) Use knowledge of the wider world and experiences to plan and design for a specific criteria. (Communicating) State how the product will be suitable for the intended users (Working with tools) Construct products with increasing accuracy and strength which have mechanical components (Food) Create a simple meal by combining food ingredients		

Year 3 DT	Developing Planning and Communicating ideas	Working with tools, equipment, materials and components including food	Evaluating processes and products
Vocabulary	User, purpose, pin fabric, tape fabric, leisure, culture, functional, qualities, designer, input, output, heat source, mechanical,		
Tier 2	Generate logical create adaptations communicate information' diagrams adaptations outcome source base evaluations criteria constructive feedback		
Knowledge including knowledge of how	Know about lesire industry Know about products used in different cultures Generate ideas for an item, considering its purpose to the users (Y2) Establish a criteria for a successful product (Y2) Plan the order of their work before starting Make drawings with annotated labels when designing (Y2) Work confidently within a range of contexts inc home, school, leisure, cultures Make a scaled down version of their model before making (Y1,2) Explore, develop and communicate designs in a range of ways (Y1,2) Gather information about the needs and wants of individuals and groups	How to use science to help design and make products work About the functional qualities of their product How to use math's to help design and make products that work How levers and linkages create movement How to make strong, stioff shell structures (Y2) Select tools and techniques for making their product and explain their choices (Y2) Select materials for making their product and explain their choices (Y2) Measure, mark out, cut, score, assemble with increasing accuracy (Y1,2) Work safely and accurately with a range of simple tools (Y1,2) Think about their ideas as they make progress and be willing to change things if this helps improve their wirk (Y1,2) Measure, tape, pin, cut and join fabric with some accuracy (Y2) Use a range of finishing techniques to strengthen and improve the appearance of their product (Y2) Use ICT equipment to enhance their product That plants are grown (Y1) Animals are reared (Y1) About what constitutes a healthy diet (Y2) Know how to store food safely and hygienically (Y2) Prepare and cook a savoury dish safely and hygienically with the use of a heat source (Y1,2)	How to disassemble a product safely and appropriately Know a range of designers Evaluate their product against their chosen criteria, e.g. how well did it meet its intended purpose (Y2) Disassemble and evaluate familiar products Consider the views of their partners when evaluating their product Investigate and analyse how well products have been designed and made and why certain materials have been chosen (Y2)
Equipment	Tape measure, ruler, metre stick, scissors, card, boxes, variety materials including fabric, food, ICT, cutting boards, knives, peelers, adhesives, needles, material, saws, hand drills, wood, vice, templates, holders, pins, fabric tape, oven, hobs, kettles, cutlery		
Skills	(Planning) Generate ideas considering the purpose and plan logical steps to create the product (Communicating) Gather information from people before designing and communicate designs through drawing, diagrams, pictures and notes		

Year 4 DT	Developing Planning and Communicating ideas	Working with tools, equipment, materials and components including food	Evaluating processes and products
Vocabulary	Temporary, permanent, industry, electrical components, switches, buzzers, motors, bulbs, wires, circuits, power source, aesthetic qualities		
Tier 2 Vocabualry	Create detailed plan processes explain annotate products reference information gather conduct combine identify development		
Knowledge includ- ing knowledge of how	Know which products are of a good quality and which need refine- ment based on research Know how to collect information from people or groups Generate ideas, considering the purposes for which they are designing (Y3) Make labelled drawings from different viewpoints showcasing specific features (Y2,3) Develop a clear idea about what has to be done, planning how to use materials, equipment and processes and suggesting alternative meth- ods of making if the first attempt fails (Y3) Develop a clear design criteria and use this to inform their ideas (Y3) Work confidently within a range of contexts inc home, school, leisure, cultures, industry (Y3) Model ideas using prototypes (Y3)	How to use science learning to help design and make products that work (Y3) That materials have aesthetic qualities That electrical systems have an input, process and output (Y3) How pneumatic systems create movement (Y3) How simple electrical circuits work How to program a computer to control their products Make specific choices about the tools and techniques Make specific choices about materials they select to make their prod- uct (Y2,3). Measure, mark out, cut, and shape a range of materials using appro- priate tools equipment and techniques more accurately and compe- tently with increasing independence (Y2,3) Join and combine materials accurately in temporary and permanent	Know which materials are recyclable/reusable Know about a range of designers and inventors (Y3) Evaluate work both during and at the end of the assignment identify- ing strengths and areas for development in their products(Y3) Carry out tests to check the quality of their product Consider the views of intended users when evaluating their product (Y3) Use their design criteria to evaluate their completed product (Y3) Investigate and analyse how well products have been designed and made and why certain materials have been chosen, what methods of construction have been used (Y2,3) Investigate and analyse the time scale for production Investigate and analyse whether products can be recycled or reused

Year 5 DT	Developing Planning and Communicating ideas	Working with tools, equipment, materials and components including food	Evaluating processes and products
Vocabulary	Ross sectional drawingDry ingredients, mm, capacity, time, length, cams, pulleys, specification, innovative, pattern pieces, co		
Tier 2 Vocabulary	Create model research explain purpose assemble finalise product increasing accuracy ensuring aesthetically procedures accurate measurements reasons identify		
Knowledge including knowledge of how	Know how to construct and carry out surveys and questionnaires, knowing what good questions to ask are (Y4) How to complete a cross sectional drawing Generate innovative ideas through brainstorming and identify a purpose for their product, communicating their ideas through cross sectional drawings (Y3,4) Draw up a specification for their design (Y4) Develop a clear idea of what has to be done, planning how to use materials, equipment and processes and suggesting alternative methods (Y4) Work confidently within a range of contexts inc home, school, leisure, cultures, industry and the wider environment(Y3,4) Model ideas using prototypes and pattern pieces (Y3,4) Produce a list of tools, equipment and materials that they will need (Y4) Carry out research using surveys and questionnaires (Y3,4) Describe the purpose of their products to others (Y3,4) Indicate design features of their products that will appeal to intended users (Y4) Use the results of investigations, information sources, including ICT when developing design ideas (Y4)	How science and maths make the products work (Y3,4) How materials can be combined to create more useful characteristics How cams and pulleys create movement How more complex circuits can be used to create functional products (Y4) How to reinforce and strengthen a 3D framework (Y3,4) Select appropriate materials. Select tools and techniques and explain choices of these (Y3,4) Explain their choice of material and components according to their functional properties and aesthetic qualities (Y3,4) Measure and mark out accurately to the nearest mm, ml, minute, g (Y4) Use skills in using different tools and equipment safely and accurately (Y3,4) Cut, join, assemble and finalise with accuracy ensuring a good quality finish to their product (Y3,4) Use a wider range of construction materials and kits, textiles, mechanical components and electrical components (Y3,4) That a recipe can be adapted by substituting or adding ingredients That seasons affect the food available Weigh and measure accurately inc time, dry ingredients, liquids, using the correct units of measurement Apply and practice food hygiene and other safe practices (Y2,3,4) Use a wider range of food ingredients(Y3,4) Prepare and cook a variety of predominantly savoury and healthy dishes safely and hygienically using a range of cooking techniques (Y4) Know about the hazards of using an oven and a hob (Y2,3,4)	Know about a range of designers and inventors, chefs and manufacturers (Y3, 4) Evaluate the product against the criteria identifying the main strengths and developments (Y3,4) Evaluate products personally and seek evaluation from others including the intended users (Y4) Investigate and analyse how well products have been designed and made and why certain materials have been chosen, what methods of construction have been used, how well the product works and achieves its purpose (Y2,3,4) Investigate and analyse how much the product costs, how innovative products are, how sustainable the materials are (Y4)
Equipment	Tape measure, ruler, meter stick, scissors, card, boxes, variety materials including fabric, food, ICT, cutting boards, knives, peelers, adhesives, needles, material, saws, hand drills, wood, vice, templates, holders, pins, fabric tape, oven, hobs, kettles, cutlery, switches, buzzers, motors, bulbs, wires, crocodile clips, batteries, pans, dishes		

Year 6 DT	Developing Planning and Communicating ideas	Working with tools, equipment, materials and components including food	Evaluating processes and products
Vocabulary	Exploded diagram, enterprise, gears, nutrients		
Tier 2 Vocabulary	Detailed production constraints resources communicate explain product creating specific resourceful tackling range ensuring quality finish hygiene procedures techniques ingredients evaluations record product purpose quality design constructive feedback target		
Knowledge including knowledge of how	How to communicate through exploded diagrams How to carry out an enterprise problem Carry out research using survey, questionnaires, interviews and web-based resources (Y5) Develop a design specification to guide their thinking (Y5) Plan the order their work choosing appropriate materials, tools and techniques (Y5) Plan an enterprise project with the aim to make a profit with a product Make design decisions based on time constraints, resources and cost Formulate step by step plans as a guide to making including a list of tools, equipment and materials (Y5) Identify the needs, wants, preferences and values of particular individuals and groups (Y4,5) Communicate their ideas through detailed labelled drawings including cross sectional drawings and exploded diagrams(Y4,5) Explore, develop and communicate aspects of their design proposals by modelling their ideas in different ways including the use of ICT Explain how particular elements of their product work indicating specific features that will appeal to their intended users	That materials have both functional and aesthetic qualities (Y5) The correct terminology for the products they are creating How gears work How to program a computer to monitor changes in the environment and control their products (Y1,3,4,5) Understand how electrical systems can be used in their products—bulbs/switches/meter circuits etc. Select appropriate materials (Y3,4,5) Select tools and techniques and explain choices of these (Y3,4,5) Measure and mark out accurately with an appropriate degree of accuracy (Y5) Assemble components and make working models (Y3,4,5) Use tools safely and with increasing accuracy (Y5) Construct products using permanent joining techniques (Y4,5) Make modifications along the way Pin, sew and stitch materials to create a product (Y2,4) Apply high quality finishes to achieve a quality product including those from art and design (Y4,5) Demonstrate resourcefulness when tackling problems How food is processed into ingredients that can be eaten or used in cooking (Y1-5) That recipes can be adapted to change the appearance That different food and drinks contain different substances—nutrients, water and fibre—that are needed for health (Y1 - 5) Prepare and cook a variety of sweet and savoury dishes healthy, safely and hygienically using a range of cooking techniques (Y4)	Know about a range of designers and inventors, chefs and manufacturers who have developed ground-breaking products (Y3,4,5) Evaluate their products identifying strengths and areas for development and carrying out appropriate tests (Y4,5) Record their evaluations using drawings with labels Evaluate the quality of design, fitness for purpose and manufacture of their products as they design, make and finalise (Y3,4,5) Evaluate against criteria and original design specification and suggest ways that their product could be improved (Y3,4,5) Investigate and analyse how much products cost to make, how innovative products are, how sustainable materials are, what impact products have beyond their intended purpose (Y4,5)
Equipment	Tape measure, ruler, meter stick, scissors, card, boxes, variety materials including fabric, food, ICT, cutting boards, knives, peelers, adhesives, needles, material, saws, hand drills, wood, vice, templates, holders, pins, fabric tape, oven, hobs, kettles, cutlery, switches, buzzers, motors, bulbs, wires, crocodile clips, batteries, pans, dishes		
Skills (End Points)	(Planning) Plan detailed steps for production including time constraints, costs and resources (Communicating) Communicate their project explaining how specific parts of their product work (Working with tools) Be resourceful when tackling problems when creating working models from a range of materials ensuring a high quality finish		