Design Technology Long Term Overview - 2024 to 25 - (detailing links to National Curriculum and Tier 3 Vocabulary)

Year Group	Autumn	Spring	Summer
	All About Me (Aut 1) My Place in the World (Aut 2)	Materials Matter (Spr 1) Habitats - Where do animals live? (Spr 2)	Farm to Fork (Sum 1) Once Upon a Time …..Long Ago (Sum 2)
EYFS -	- Know how to wash their hands independently befor cooking activity. - Follow steps to make currant buns, pizza and brea including how to weigh ingredients - - Know the vocabulary associated with different kitch utensils e.g. chopping (knife), scooping (spoon), stirr (spoon) - Make healthy food choices within the classroom - Develop skills needed to use a knife and fork	- Know the vocabulary associated with choosing a material for specific purpose. e.g. strong, flat, rigic - - Know how to use tools to stir, mix, pour and blen - Know how to use a range of tools, e.g. scissors, hol punch, stapler, woodworking tools, rolling pins, past cutters.	- Know how to make a structure stand tall or wide. - Know how to make a wind up toy, or a toy with a pul cogs etc move. - Know how to investigate the structure if an object e the baby bear's chair.
Tier 2 and 3 Vocabulary	weigh, scales, clean, hygiene, construct, build, tool, select, cutlery, safely, pattern, repeat, stirring, chopping, scooping	2D and 3D shape, combine, force, float, sink, density, surface, flat, strong, rigid, stir, mix, pour, blend, design, material, plan, evaluate, product	tangrams, frameworks, structure, stronger, moving part, lever, hinge, magnetic, float, sink
Year 1	**Cooking and Nutrition** Investigate, disassemble and evaluate different fruit sal Preparing Fruit and Vegetables Fruit Salad	**Mechanisms** Levers and Sliders Design, make and evaluate sliders and levers for the Gr Fire of London	**Structures** Free Standing Structures (class based) Design, make and evaluate a strong chair for Baby Bea (class based linking to writing across the curriculum)
Tier 2 and 3 Vocabulary	origin, organic, balanced diet, nutrients hygiene, prevent, preparation, produce, skin, peel, pith, flesh, pips, stones, design, evaluate, chopping technique	mechanism, pivot, rigid, flap, slider, lever, slot, guide or bridge, assemble, disassemble, design, product,	freestanding structures, frame structure, shell structure, stability, buttress, brick bonding, prototype
Year 2	**Textiles** Templates and joining techniques Christmas Finger Puppets (class based for the Christmas Fair)	**Mechanisms** Wheels and axles Moon Buggies	**Cooking and Nutrition** Preparing Fruit and Vegetables Healthy Packed Lunches - design, make, evaluate a bre based product with a filling
Tier 2 and 3 Vocabulary	appliqué, design brief, success criteria, embroidery, evaluate, fray, stocking, prototype, seam, sew, template	design brief, success criteria, designer, purpose, function, components, shaping, joining, stability, equipment, axle, axle holder, chassis, friction, dowel, fixings, mechanism, terrain,	appearance, texture, sensory evaluation, peel, chop, slice, grate, spread, apple corer, strawberry huller

Year Group	Autumn	Spring	Summer
Year 3	**Structures** Shell structures using CAD (introduce 2025 to 26) Picture Frames (2024 to25)	**Mechanical Systems** (class based in literacy and link to writing across the curriculum) Pneumatics	**Cooking and Nutrition** Celebrating Culture and Seasonality - Dips and Dippers
Tier 2 and 3 Vocabulary	Computer aided design (CAD), shell structure, edge, face, vertex, font, net, cuboid, prism	compressed, input, output, pivot, lever, pneumatic, hydraulic, pressure, inflate, deflate, syringe, system	seasonality, traditional, availability, culture, tradition, food miles, reared, processed
Year 4	**Cooking and Nutrition** Healthy and Varied Diet - Pizzas	**Electrical Systems** Simple programming and control (class based) **Textiles**: 2D shape to 3D product (PPA team deliver)	**Structures** Shell Structures (class based linked to measurement in mathematics)
Tier 2 and 3 Vocabulary	rubbing in, knead, dough, germ, yeast, unleavened bread	**Electrical systems** - program, micro-controller, light emitting diode (LED), system, output devices, input devices, process **Textiles** - appliqué, patterns. templates, seam, seam allowance, prototype, aesthetics, finishing	cuboid, edge, face, font, net, prism, scoring, shell structure, vertex
Year 5	**Mechanisms** Levers and Linkages (class based) Festive card with moving parts	**Mechanical Systems** Pulleys and Gears Castles	**Mechanical Systems** Cams (2024 to 25)
Tier 2 and 3 Vocabulary	mechanism, lever, linkage, slot, guide, bridge, loose pivot, fixed pivot, system	pulley, gear, drive belt, gearing up or down, mechanical systems, driver, follower, mesh, motor spindle	rotary motion, oscillating motion, reciprocating motion, cam, rollover, lever, slider, guide, spacer
Year 6	**Electrical Systems** (class based linked to Science) More complex switches and circuits	**Structures** (Started 2024 to 25) Design and construct a bird hide	**Textiles** (class based) Autumn 2025 to 26 geography link - where do clothes travel from? Using computer aided design in textiles (2025 to 26) Textiles - sustainable sewing - 2024 to 25
Tier 2 and 3 Vocabulary	series circuit, parallel circuit, reed switch, latching swit micro switch, input device, output device, system, monitor, control, program, flowchart	frame structure, stiffen, strengthen, reinforce, triangulation, stability, shape, join, temporary, permanent, strut, tension	computer aided design (CAD), computer aided manufacture (CAM, pattern, template, seam allowance, specification, tacking, working drawing

DT Progression in Key Knowledge and Disciplinary Skills - Retrieval Practice/spaced learning

Year Group	**Investigates, disassemble, evaluate. Design, Make, Evaluate (including creating and testing prototypes) Technical Knowledge (including food and nutrition)**		
EYFS	All About Me (Aut 1) My Place in the World (Aut 2)	Materials Matter (Spr 1) Habitats - Where do animals live? (Spr 2)	Farm to Fork (Sum 1) Once Upon a Time …..Long Ago (Sum 2)
	- Know how to wash their hands independently before cooking activity. - Follow steps to make currant buns, pizza and bread including how to weigh ingredients - Know the vocabulary associated with different kitchen utensils e.g. chopping (knife), scooping (spoon), stirring (spoon) - **Make** healthy food choices within the classroom - Develop skills needed to use a knife and fork	- Know the vocabulary associated with choosing a material for specific purpose. e.g. strong, flat, rigid - Know how to use tools to stir, mix, pour and blend. - Know how to use a range of tools, e.g. scissors, hole punch, stapler, woodworking tools, rolling pins, pastry cutters.	- Know how to make a structure stand tall or wide. - Know how to make a wind up toy, or a toy with a pulley, cogs etc move. - Know how to investigate the structure if an object e.g. the baby bear's chair.
Year 1	**Cooking and Nutrition** Investigate, disassemble and evaluate different fruit salads Preparing Fruit and Vegetables Fruit Salad	**Mechanisms** Levers and Sliders Design, make and evaluate sliders and levers for the Great Fire of London	**Structures** Free Standing Structures (class based) Design, make and evaluate a strong chair for Baby Bear (class based linking to writing across the curriculum)
	- Know that food can be described according to its taste, smell, texture and feel. - Have knowledge of different food groups e.g. fruit and vegetables. - Know that we need to work safely and hygienically. - Know how to use a bridge cut to chop fruit.	- Know how to fold, tear and cut paper and card. - Know how to cut along lines, straight and curved, how to curl paper and how to use a whole punch. - Know what happens when paper fasteners are used for card linkages. - Use simple sliders. - Know how to strengthen sheet materials.	- Know how to join different materials using glue and tape. - Mark out materials to be cut using a template
Year 2	**Textiles** Templates and joining techniques Christmas Finger Puppets (class based for the Christmas Fair)	**Mechanisms** Wheels and axles Moon Buggies	**Cooking and Nutrition** Preparing Fruit and Vegetables Healthy Packed Lunches - design, make, evaluate a bread based product with a filling
	- Cut out shapes which have been created by drawing round a template onto the fabric. - Know how to join fabrics by using running stitch, glue, staples or tape. - Decorate fabrics with buttons, beads, sequins, braids, ribbons.	- Use a range of materials to create models with wheels and axles e.g. tubes, dowel, cotton reels - Know how to attach wheels to a chassis using an axle. - Know how to use glue, cool glue guns, or tape to join different materials. - Under supervision know how to use a hacksaw.	- Know that we need to consume a variety of foods to maintain a healthy diet. - Know how to cut, peel, grate, chop a range of ingredients. - Know how to measure and weigh food items using non-statutory measures e.g. spoons, cups

Year 3	**Structures** Shell structures using CAD (introduce 2025 to 26) Picture Frames (2024 to25)	**Mechanical Systems** (class based in literacy and link to writing across the curriculum) Pneumatics	**Cooking and Nutrition** Celebrating Culture and Seasonality - Dips and Dippers
	- Know how to create shell or frame structures, strengthen frames with diagonal struts. - Know how to control a model using an ICT control programme (from 2025 to 26) - Know how to make structures more stable by giving them a wide base. - Measure and mark square selection, strip and dowel accordingly to 1cm. - Know how to use glue gun with close supervision (one to one)	- Know which tools to se for a particular task and show knowledge in handling of tools- scissors for cutting/ rulers for accurate measurement. - Know that pneumatic systems have an input and an output.	- Know how to prepare food products showing understanding of the properties of ingredients and availability due to seasonality. - Taste a range of ingredients, food items to develop a sensory food vocabulary for use when designing. - Independently weigh and measure accurately using scales. - Cut and shape ingredients using appropriate tools and equipment e.g. grating. - Join and combine food ingredients appropriately e.g. beating, rubbing in - Show awareness of a healthy diet from an understanding of a balanced diet.
Year 4	**Cooking and Nutrition** Healthy and Varied Diet - Pizzas	**Electrical Systems** Simple programming and control (class based) **Textiles**: 2D shape to 3D product (PPA team deliver)	**Structures** Shell Structures (class based linked to measurement in mathematics)
	- Know that the appearance of the product will change during proving and cooking. - Know that their product should match the needs of the intended user. - Know how to weigh and measure using scales. Know how to mix and knead ingredients. - Plan independently how to work safely and hygienically.	- Know how to Incorporate a circuit with a bulb or buzzer into a model. - Know how to create a circuit that incorporates an element of control. Textiles: - Create 3D products using pattern pieces and seam allowance. - Know how to decorate textiles appropriately before joining components. - Know how to pin and tack fabric pieces together. - Know how to join fabrics using over sewing, back stitch, blanket stitch. - Know where fabrics may be stressed and require strengthening.	- Know how to create shell or frame structures, strengthen frames with diagonal struts. - Know how to make structures more stable by giving them a wide base. - Measure and mark square selection, strip and dowel accordingly to 1cm. - Know how to use glue gun with close supervision (one to one)

Year 5	**Mechanisms** Levers and Linkages (class based) Festive card with moving parts	**Mechanical Systems** Pulleys and Gears Castles	**Mechanical Systems** Cams (2024 to 25)
	- Know how to cut slots. - Know how to cut internal shapes. - Use lolly sticks/card to make levers and linkages. - Know how linkages are used to make movement larger or more varied. - Use and explore complex pop ups.	- Know how use bradawl to mark hole positions. - Know how cams and pulleys work and incorporate into final design. - Know how to cut strip wood, dowel, square section wood accurately to 1mm. - Know how to Join materials using appropriate methods. Incorporate motor and a switch into a model. - Know how to build frameworks using a range of materials e.g. wood, card corrugated plastic to support mechanisms. - Know how to use glue gun with close supervision.	- Know how cams and pulleys work and incorporate into final design. - Know how to Join materials using appropriate methods. - Know how to build frameworks using a range of materials e.g. wood, card corrugated plastic to support mechanisms. - Know how to use glue gun with close supervision.
Year 6	**Electrical Systems** (class based linked to Science) More complex switches and circuits	**Structures** (Started 2024 to 25) Design and construct a bird hide	**Textiles** (class based) Autumn 2025 to 26 geography link - where do clothes travel from? Using computer aided design in textiles (2025 to 26) Textiles - sustainable sewing - 2024 to 25
	- Know how to write a sequence of instructions where a decision is made e.g. when a switch is pressed a buzzer is activated. - Use a 'control language' or create a flowchart to produce a series of instructions. - Use their learning in computing to control and monitor products they have designed and made e.g. alarm system.	- Use a construction kit consisting of plastic strips and paper fasteners to build 2-D frameworks. - Use triangulation to add strength to a structure. - Demonstrate how paper tubes can be made from rolling sheets of newspaper diagonally around pieces ofe.g. dowel. - Build 3-D frameworks such as cubes, cuboids and pyramids. - Develop skills and techniques using junior hacksaws, G-clamps, bench hooks, square section wood, card triangles and hand drills to construct wooden frames, as appropriate.	- Develop skills of computer-aided design (CAD) by using on-line pattern making software to generate pattern pieces. - Develop skills of threading needles and joining textiles using a range of stitches (over-sewing, back stitch etc). - Use pattern pieces and seam allowance.