

Subject progression: DESIGN TECHNOLOGY

Year & theme	Vocabulary	Objectives Procedural (I can . . .)	Objectives Declarative (I know . . .)
FS1 - Mechanisms	Rip, scrunch, tear, snip, join, glue, masking tape, Sellotape.	<u>Exploring Paper</u> <ul style="list-style-type: none">• I can select and use activities and resources, with help when needed.• I can explore varied materials freely, to develop ideas about how to use them and what to make.• I can use one-handed tools and equipment.• I can think of my own ideas and construct with a purpose in mind.• I can verbalise an idea with an adult and draw a picture of what I want to make.• I can take a picture of my final piece and talk about how to make it better.	<ul style="list-style-type: none">• I know how to choose the right resources to carry out my own plan.• I know I can explore how things work.• I know how to develop ideas and decide which materials to use to express them.• I know how to manipulate materials by tearing, scrunching, ripping, and beginning to make snips with scissors.• I know how to put materials back together using glue and tape.

Ribbon, wool, material, thread, weave.

Weaving

- I can select and use activities and resources, with help when needed.
- I can explore varied materials freely, to develop ideas about how to use them and what to make.
- I can use one-handed tools and equipment.
- I can think of an idea and make my own decisions about how to approach the task.
- I can weave using ribbon, wool, and materials and begin to use a large plastic needle.
- I can review how well my approached work and how I could make it better.

- I know how to choose the right resources to carry out my own plan.
- I know I can explore how things work.
- I know how to develop ideas and decide which materials to use to express them.
- I know how to weave using various materials.
- I know that persistence or another approach will give me the results I want.

Build, fall, safe, stack.

Building Stronger

- I can make imaginative 'small worlds' with blocks and construction kits.
- I can select and use activities and resources, with help when needed.
- I can explore varied materials freely, to develop ideas about how to use them and what to make.
- I can move with more fluency and develop control using tools.
- I can make a structure with a purpose in mind.
- I can stack blocks vertically and horizontally, making enclosures and creating spaces.
- I can make improvements to my structure and tell an adult about it.

- I know how to choose the right resources to carry out my own plan.
- I know I can explore how things work.
- I know how to develop ideas and decide which materials to use to express them.
- I know different types of buildings and what they are used for.
- I know what shapes are to build with.
- I know if my structure has done its job.

<p style="text-align: center;">FS1 - Food</p>	<p>Grow, cook, bake, wash, taste, mix.</p>	<p><u>New Tastes</u></p> <ul style="list-style-type: none"> • I can select and use activities and resources, with help when needed. • I can explore varied materials freely, to develop ideas about how to use them and what to make. • I can use one-handed tools and equipment. • I can taste foods linked to stories. • I can engage in adult led baking. • I can talk about the taste of food and if I like or dislike the taste. 	<ul style="list-style-type: none"> • I know that some food is grown. • I know how to wash my hands before eating or making food.
<p style="text-align: center;">FS2 - Mechanisms</p>	<p>Cut, shred, hole punch, curl, fold, blue tack, treasury tags, staples.</p>	<p><u>Exploring Paper</u></p> <ul style="list-style-type: none"> • I can develop my small motor skills so I can use a range of tools, competently, safely, and confidently. • I can move with more fluency and develop control using tools. • I can move with more fluency and develop control using tools. • ELG- I can share my creations, explaining the process I have used. • I can think of my own ideas, plan, and make my own decisions about how to approach a task and discuss these ideas with an adult. • I can manipulate materials and construct with a purpose in mind, adding embellishments for a finished product. • I can draw/take a picture and discuss my products achievements and faults. 	<ul style="list-style-type: none"> • I know how to return to and build on previous learning, refining ideas and developing an ability to represent them. • I know how to explore, use, and refine a variety of artistic effects to express ideas. • ELG- I know how to use a range of small tools, safely and experiment with colour, design, texture, form, and function. • I know how to manipulate materials by previous learnt techniques and cutting, shredding, curling, folding and hole punching. • I know how to reattach materials using previous learnt techniques and blue tack, treasury tags and staples.

<p style="text-align: center;">FS2 - Textiles</p>	<p>Natural, manufactured, running stitch, Binca</p>	<p><u>Weaving</u></p> <ul style="list-style-type: none"> • I can create collaboratively, sharing ideas, resources, and skills. • I can develop my small motor skills so I can use a range of tools, competently, safely, and confidently. • I can move with more fluency and develop control using tools. • I can think of an idea and make my own decisions about how to approach the task. • I can weave using various materials and use a large plastic needle. • I can review how well my approached work and how I could make it better. 	<ul style="list-style-type: none"> • I know how to return to and build on previous learning, refining ideas and developing an ability to represent them. • I know how to explore, use, and refine a variety of artistic effects to express ideas. • ELG- I know how to use a range of small tools, safely and experiment with colour, design, texture, form, and function. • I know how to weave using various materials, natural and manufactured. • I know how to use a running stitch. • I know that persistence or another approach will give me the results I want.
<p style="text-align: center;">FS2 - Structures</p>	<p>Build, fall, safe, stack.</p>	<p><u>Building Stronger</u></p> <ul style="list-style-type: none"> • I can develop my small motor skills so I can use a range of tools, competently, safely, and confidently. • ELG- I can share my creations, explaining the process I have used. • I can make a structure with a purpose in mind. • I can stack blocks vertically and horizontally, making enclosures and creating spaces for a specific brief. • I can make improvements to my structure and tell an adult about it. 	<ul style="list-style-type: none"> • I know how to return to and build on previous learning, refining ideas and developing an ability to represent them. • I know how to explore, use, and refine a variety of artistic effects to express ideas. • ELG- I know how to use a range of small tools, safely and experiment with colour, design, texture, form, and function. • I know different types of buildings and what they are used for. • I know what shapes are best to build with. • I know if my structure has done its job.

<p style="text-align: center;">FS2 - Food</p>	<p>Plant, seeds, harvest, raw, cooked, pour, stir, rolling, cutting.</p>	<p><u>New Tastes</u></p> <ul style="list-style-type: none"> • I can develop my small motor skills so I can use a range of tools, competently, safely, and confidently. • I can move with more fluency and develop control using tools. • I can taste foods linked to stories and events • I can engage in adult led baking and begin to use some of the tools safely. • I can talk about the taste of food and if I like or dislike the taste. 	<ul style="list-style-type: none"> • I know that some food is grown, and some food comes from animals. • I know how to wash my hands before eating or making food. • I know that some foods are healthy, and some foods need to be eaten in moderation.
<p style="text-align: center;">Year 1: A2 - Mechanisms</p>	<p>Sliders, levers, slider rod, guide bridge, rotating, horizontal, vertical, diagonal, rigid, pivot</p>	<p><u>Christmas Cards:</u></p> <ul style="list-style-type: none"> • I can design a Christmas card with mechanical elements. • I can make a Christmas card by selecting appropriate tools and techniques. • I can evaluate a Christmas card against the original criteria and reflect on its success. 	<ul style="list-style-type: none"> • I know how moving cards and books work. • I know how levers and sliders work in paper and card format.
<p style="text-align: center;">Year 1: S1 - Structures</p>	<p>Frame solid/combined structure. Natural, manufactured, Stable, Unstable, balanced, free-standing, anchor, brace, base, A frame, rigid, folding, rolling, joining, beam, column, slab, cuboid, triangular prism.</p>	<p><u>London's Burning:</u></p> <ul style="list-style-type: none"> • I can generate designs using mock-ups, discussion, and drawings. • I can use templates, nets, and recycled materials, select from basic crafting tools, and use finishing techniques to style my medieval house. • I can test the structures strength and reflect on the finished product by expressing likes, dislikes, and improvements. 	<ul style="list-style-type: none"> • I know about different structure formats and understand how to turn 2D nets into 3D shapes. • I know about materials to make new and medieval structures.

Year 1: S2 - Food

Grating, chopping, peeling, the bridge hold, thumbs tucked, weighing, squeezing, stirring, blending, tasting, texture.

Make a Smoothie:

- I can design an appealing product, thinking about the ingredients.
- I can generate ideas through tasting various combinations and adapting recipes.
- I can prepare, chop and blend fruit correctly and safely, using simple utensils.
- I can trial and explore combinations, specify favourite flavours, and produce a finished smoothie against the original criteria.

- I know the differences between exotic fruits and vegetables and can describe texture and taste.
- I know about where and how fruits grow and can identify them and understand they play part of a healthy diet.

Year 2:
A1, Textiles

Sewing, needle point and eye, Thread, Fabrics, Knot Embellishments, Template, Running stitch

Mini stockings:

- I can design a functional, appealing product for a chosen user and purpose generating and communicating ideas through sketches and annotation using a template.
- I can make a mini stocking by threading a needle, sewing a running stitch to join two pieces of fabric together and tying a secure knot.
- I can evaluate the finished product by discussing the making process and reviewing other's and own outcome.

- I know how to identify the parts of a needle (point and eye).
- I know how to join fabrics and add embellishments.

Year 2: S1 - Food

Preparation,
Hygienic,
Claw Grip,
Slice, Chop.
Balanced diet,
Food group,
Recipe, Stirring,
Vegetables,
Herbs, Texture,
Aroma, Research,
Product

Sensational Salad:

- I can create a design for a healthy wrap, couscous or pasta salad while following a design brief.
- I can prepare food safely and hygienically, chopping and slicing safely using a bridge of claw grip.
- I can conduct product research in order to evaluate a product, trialling and feeding back on food tastes, texture and aroma.

- I know how to identify each of the food groups and am beginning to understand what makes a balanced diet.
- I know that sugars may be hidden in everyday foods.

Year 2: S2 - Mechanisms

Wheels, Axles,
Chassis,
Mechanisms,
Rotating, Attach,
Cylinder Force,
Tools, Sketch,
Adapt

Toy Cars:

- I can plan a toy vehicle by generating ideas, sketching, measuring and planning the chassis of the vehicle and the racing colours/ flag of their team's design.
- I can make a toy vehicle by adapting mechanisms, measuring and cutting accurately to a design brief, selecting a range of tools and equipment and materials to perform practical tasks.
- I can research and test mechanisms by racing each teams' vehicles in order to evaluate their ideas against original criteria.

- I know how wheels work as part of a full mechanism including axles and axle holders.
- I know how to identify commonly used materials for wheels.

<p>Year 3: A2 - Mechanisms</p>	<p>Pneumatics, compressed, pressure, hydraulics, automatic, piston, hollow cylinder, reciprocating, Force, Friction</p>	<p><u>Design a vehicle with force:</u></p> <ul style="list-style-type: none"> • I can design a pneumatic toy car using sketches to model ideas. • I can make a pneumatic car selecting and using tools with some accuracy. • I can assess how well the product works and if it matches the original criteria. 	<ul style="list-style-type: none"> • I know how pneumatic systems work. • I know some everyday products that use pneumatics.
<p>Year 3: S1 - Food</p>	<p>Ingredients, Method, Seasonal, Rubbing In, Adapt, Climate, Harvested, Pastry - Sweet/Savoury, Weighing, Texture, Grown/Reared, Processed, Names of fruits used i.e., rhubarb, blackberries, raspberries, apples</p>	<p><u>Eating seasonally:</u></p> <ul style="list-style-type: none"> • I can generate and adapt a seasonal recipe for a crumble or tart based on research. • I can make a crumble or tart by safely preparing fruit or vegetables whilst learning the 'rubbing in' method. • I can follow and adapt a recipe. • I can taste and evaluate my finished dessert against criteria. 	<ul style="list-style-type: none"> • I know what foods are in season and when. • I know how climate affects which foods can grow naturally in different environments.
<p>Year 3: S2 - Structures</p>	<p>Laminating, Corrugating, Ribbing, Flange, L-Brace, Score, Measuring, Estimating, Nets, Cube, Cuboid, Component Parts, Assemble, Diagram, Modify</p>	<p><u>Fabulous Fossils:</u></p> <ul style="list-style-type: none"> • I can plan a suitable shell structure to display and protect fossils using annotated diagrams. • I can make and adapt a shell structure using techniques such as laminating, corrugating and joining. • I can reflect on my own and other's products and make modifications as required. 	<ul style="list-style-type: none"> • I know how to assess existing nets to test their strength and suitability for a purpose. • I know how to consolidate methods and techniques to improve stability and strength using paper and card.

<p>Year 4: A2 Electrical Systems</p>	<p>Construction, Battery, Circuit, Bulb, Cell, Structures, insulator, conductor, crocodile clip, connection</p>	<p><u>Let there be light:</u></p> <ul style="list-style-type: none"> • I can design a night light for a specific purpose and audience. • I can make a functional, operational electrical series-circuit and housing this appropriately within the frame structure. • I can review and evaluate existing night lights and torches, including use and the reasons behind the materials. 	<ul style="list-style-type: none"> • I know the names of some electrical components (bulb, cell). • I know how to build a working electrical series circuit and correct errors. • I know how to build on prior knowledge of net structures and broadening knowledge of frames.
<p>Year 4: S1 Textiles</p>	<p>Applique, Pattern, Cross Stitch, Seam, Fastening, Wadding, Reinforce, Right side, Wrong side, Pins</p>	<p><u>2D shape to 3D shape- Cushions:</u></p> <ul style="list-style-type: none"> • I can design the style, shape, and seams of the cushion, using pattern piece templates and models on CAD and in sketches. • I can sew using cross stitch and running stitch to join, complete seams, seal stuffing and add applique decorative elements. • I can review existing products and express constructive feedback on other's work. 	<ul style="list-style-type: none"> • I know that fabrics can be layered for effect, recognising the appearance and technique for different stitch types. • I know how to use strengthening techniques to reinforce joins.
<p>Year 4: S2 Food</p>	<p>Creaming, Batter, Icing, Hygienic, Fat, Sugar, Carbohydrate, Adaptation, Whisk, Fold, Temperature, Decorate, Fondant Icing, Royal Icing, Buttercream, Temperature</p>	<p><u>Cakes Galore:</u></p> <ul style="list-style-type: none"> • I can review existing products to inform design ideas, working within a set design brief. • I can follow and adapt an existing recipe whilst preparing food hygienically. • I can reflect on and identify flavours from a prototype, reviewing what aspects to change to improve the current recipe. 	<ul style="list-style-type: none"> • I know how to identify the cost implications behind professional food preparation. • I know how to alter the batter and toppings to change the taste and to 'cream' the wet ingredients before combining the dry.

Year 5: A2 Food

Utensils,
Sprinkle, Pour,
Roll Out, Shape,
Grams, Kilograms,
Complementary,
Cross-
contamination,
Theme,
Change of State,
Target consumer,
Garnish

The Great British Bake Off:

- I can review existing products to inform design ideas, working within a set design brief 'Afternoon tea party' to include a change of state.
- I can follow whilst adapting an existing recipe, preparing food hygienically, creaming and combining ingredients to make a basic dessert.
- I can reflect on and identify flavours from a prototype, reviewing what aspects to change to improve the current recipe.

- I know how to investigate the production of flour, sugar and butter and can use this knowledge to inform change of state when making deserts.
- I know how to research and adapt a recipe.

Year 5: S1 Mechanisms

Lever, Pivots,
Pulleys, Linkages,
Gear Train,
Interlock, Mitre
Gear, Driver Gear,
Circumference,
Mechanical
Advantage,
Physicist, Block
and Tackle

Titanic- how can we escape?

- I can devise and use design criteria to plan the design of a lifeboat pulley system, drawing simple diagrams to express ideas.
- I can make a lifeboat pulley system by assembling accurately, selecting appropriate mechanisms and pieces to build the pulley systems.
- I can carry out primary research, exploring and discussing existing objects which have linkages, levers, pivots, and pulleys.

- I know how to identify inputs and outputs as part of a mechanism.
- I know how linkages, levers and pulleys operate together.

Year 5: S2 Structures

Triangulation, Bracing, Rigid, Truss, Strut, Joining Plate, Interlocking, Chords, Girders, Wood, Steel, Jinks Corners, Cross Beams

Bridge building:

- I can design arch and truss bridges, modelling various methods of bridge-making using CAD.
- I can use tools to accurately measure, mark out, cut, shape, and join materials to make frameworks whilst using triangulation for bracing.
- I can test through trial and error to evaluate the successful and unsuccessful functional properties of a design and its materials.

- I know how to understand the importance of compression and tension in bridge structures.
- I know how to establish methods of reinforcing more complex structures to improve strength, stability, and stiffness.
- I know how to research key events and individuals relevant to frame structures.

Year 6: S1 Food

Nutrition, Crushing, Sautéing, Prototype, Perishable, Infectious, Intolerance, Gluten, Dairy, Allergy, Vegetarian, Vegan, Substitute

Come Dine with Me- Adapt a moussaka:

- I can adapt an existing recipe for moussaka.
- I can cut, prepare, and cook vegetables and meat hygienically, using kitchen equipment such as knives, hot pans, hobs, and ovens in a safe manner, recognising when meat/ food is cooked.
- I can evaluate existing products by tasting and feeding back on existing pre-made moussaka, suggesting substitute ingredients.

- I know where meat comes from and understand the ethical issues around lamb.
- I know how to identify the nutritional values and contents on packaged food in order to make healthier ingredient choices.

Year 6: S2 Textiles

Tessellate, Seam allowance, Hidden Seam, Hem, Pattern Pieces, Names of Fabrics used – i.e., cotton, linen, polyester, wool, denim, pinking shears, backstitch, whipstitch, blanket stitch

Fancy a bag?

- I can devise a list of design criteria, planning, sketching and annotating design ideas, and amending to create a final design using CAD.
- I can make a bag by marking out, cutting, and joining fabrics accurately, creating a consistent seam, attaching fastenings and adding decorative elements.
- I can evaluate the final outcome against the criteria set, including clients' requirements and preferences.

- I know how to research types of bags with a specific purpose in mind and understand stitches and fastenings and their pros and cons.
- I know how to use pattern pieces to tessellate and save fabric as well as produce more accurate results.
- I know how to create hidden seams, accurate and consistent stitches, and secure fastenings.