Progression of Skills: Design Technology

By the end of Key Stage 1, children will have developed a secure foundation in design and technology, becoming confident, creative and curious young designers. They will design and make purposeful products using basic tools, materials, mechanisms and food preparation skills. Children will evaluate their products against their intended purpose, explain their choices and suggest improvements, preparing them to develop their designing and making skills in Key Stage 2.

By the end of Key Stage 2, children will have developed secure design and technology knowledge and skills, becoming confident, innovative and independent designers. They will research, design and create functional, sustainable products that meet the needs of specific users. Children will select appropriate materials, tools and techniques, critically evaluate their designs and consider their functionality, environmental impact and potential improvements, preparing them to solve real-world problems creatively at secondary school.

	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Autumn	Year A: Soup Year B: Soup	Simple stitches	Healthy wrap	Pneumatic toys	Adapting a recipe - biscuits	Sewing – Christmas stockings	Electrical systems – steady hand game
Spring	Year A: Bookmarks Year B: Boats	Smoothies	Moving monsters	Egyptian collars	Textiles - fastenings	Adapting a recipe – spaghetti bolognese	Cooking and nutrition – afternoon tea
Summer	Year A: Boats Year B: Rainbow salad	Stable structures	Baby bear's chair	Seasonal food	Electrical systems - torches	Designing wearable technology	Structures – playground pioneers

1. DESIGN – Research, generate, communicate and plan

Skill strand	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Understanding users and purpose	I can say what I want to make and who might use it.	I can say who a product is for and what it needs to do.	I can design for a named user and explain their needs.	I can identify a user and purpose before designing a product.	I can use a design brief to consider a user's needs.	I can research users and respond to a more detailed design brief.	I can research an intended audience and justify detailed design criteria.
Generating and developing ideas	I can share ideas through talk, drawing and play.	I can suggest ideas from looking at existing products.	I can develop ideas using simple design criteria.	I can compare possible designs and choose an approach.	I can refine ideas in response to function and feedback.	I can develop alternative solutions and select a suitable design.	I can generate innovative ideas, refine them and explain my decisions.
Communicating design ideas	I can draw or describe what I plan to make.	I can use drawings and simple templates to show my ideas.	I can make labelled drawings and simple models.	I can use sketches, models and prototypes to explain my design.	I can use annotated sketches and templates to communicate detail.	I can use diagrams, labels, prototypes and presentations.	I can create detailed annotated plans, prototypes and appropriate digital designs.
Planning the making process	I can say what I will do first and next.	I can follow simple steps to make a product.	I can put the steps of making in a sensible order.	I can follow a plan and select steps for a practical task.	I can plan the order of making and identify improvements before construction.	I can plan collaboratively, allocating tasks and resources.	I can organise, adapt and manage a project independently.

2. MAKE – Materials, tools and accuracy

Skill strand	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Selecting materials and components	I can choose from familiar materials and say why.	I can choose materials and components for a simple purpose.	I can select materials based on their useful properties.	I can choose materials that suit the function and appearance of my product.	I can justify material choices using strength, finish and suitability.	I can independently select materials for function, quality and appearance.	I can justify precise material choices, considering performance and finish.
Safe use of tools	I can use simple tools with adult support.	I can use scissors, glue and simple preparation tools safely.	I can cut, grate, spread and join with increasing control.	I can use appropriate tools to prepare food and assemble products safely.	I can select and use tools and equipment accurately and safely.	I can choose tools independently and use them with precision.	I can demonstrate safe, confident and precise tool use throughout a project.
Measuring, marking and cutting	I can explore measuring and cut simple shapes with help.	I can make simple marks and cut along straight lines.	I can measure and cut materials with growing accuracy.	I can measure fabric and ingredients and use simple templates.	I can measure ingredients and cut components accurately.	I can measure and cut accurately, checking fit and finish.	I can measure, scale and construct with precision and attention to detail.
Joining, assembling and finishing	I can join materials using glue, tape or other simple methods.	I can join materials to make a simple finished product.	I can select joining methods and assemble moving parts.	I can combine materials and mechanisms into a working product.	I can assemble products accurately using suitable joins and fastenings.	I can refine joins and finishes to improve durability and appearance.	I can independently construct and finish a high-quality functional product.

3. EVALUATE – Test, improve and reflect

Skill strand	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Investigating existing products	I can talk about products I use and what I like.	I can identify useful features of an existing product.	I can compare products for a particular purpose.	I can explain how an existing product works for its user.	I can investigate product features, materials and functions.	I can analyse existing products to inform my design decisions.	I can critically analyse products and use findings to justify design choices.
Testing against design criteria	I can try out my model and say whether it works.	I can test my product and say what works well.	I can test whether my product meets simple design criteria.	I can test a mechanism or product and identify weaknesses.	I can evaluate function, suitability and appearance against criteria.	I can test prototypes and evaluate them against a detailed brief.	I can evaluate safety, performance, user experience and effectiveness.
Improving and responding to feedback	I can suggest one thing I would change.	I can listen to feedback and suggest a simple improvement.	I can adapt a design to improve how it works.	I can explain what I would change after testing.	I can refine a product using test results and feedback.	I can improve a prototype after considering users' views.	I can justify revisions using testing evidence and user feedback.
Reflecting and presenting	I can describe my finished model.	I can explain what I made and what I enjoyed.	I can explain how design choices affected my product.	I can explain my choices using appropriate D&T vocabulary.	I can present a product with annotated sketches and reasons.	I can pitch a product to an audience using technical language.	I can maintain a design record and critically reflect on the process.

4. TECHNICAL AND PRACTICAL SKILLS – Structures

Skill strand	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Building stable structures	I can build and test simple models.	I can build a simple stable structure with supports.	I can strengthen a structure using folding and shape.	I can explore how different materials and mechanisms affect structures.	I can make stable products using accurate joining methods.	I can build and test durable, functional prototypes.	I can design and build reinforced structures, using scale where appropriate.
Strengthening and reinforcing	I can notice when a model falls or bends.	I can add a support to improve stability.	I can identify weak parts and stiffen them by folding or adding supports.	I can choose construction methods to improve strength.	I can compare joints and improve structural stability.	I can select suitable reinforcements and test their effect.	I can justify reinforcement choices and test strength and stability.

5. TECHNICAL AND PRACTICAL SKILLS – Mechanisms and mechanical systems

Skill strand	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Moving parts and simple mechanisms	I can explore toys with moving parts.	I can make simple sliders, levers, wheels or axles.	I can construct and test pivots, sliders and axles.	I can make a working pneumatic toy using air pressure.	I can choose and apply suitable mechanisms within a product.	I can test and refine moving mechanisms for a purpose.	I can combine mechanical knowledge with precise construction when needed.
Understanding and refining movement	I can notice how a push or pull moves something.	I can explain what makes a simple part move.	I can explain how a pivot, wheel or slider creates movement.	I can explain how air pressure moves parts in a pneumatic system.	I can test how well components work together.	I can improve a mechanism by changing components or construction.	I can evaluate reliability and function and justify mechanical improvements.

6. TECHNICAL AND PRACTICAL SKILLS – Textiles

Skill strand	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Cutting, joining and stitching	I can join fabric and paper using simple methods.	I can join fabric or paper by gluing, stapling or simple stitching.	I can combine fabric with paper or card neatly.	I can use running stitch, cross-stitch and appliqué in a textile product.	I can use templates and fastening techniques accurately.	I can use running and blanket stitch neatly and measure fabric accurately.	I can select and apply textile techniques independently for a purpose.
Functional and decorative textile design	I can choose colours and textures for a model.	I can decorate a product for a user.	I can combine materials to improve appearance and function.	I can select fabric and decoration for a purposeful product.	I can choose and test fastenings for a functional textile item.	I can improve a textile product for durability and appearance.	I can justify textile choices for function, finish and user needs.

7. TECHNICAL AND PRACTICAL SKILLS – Electrical systems and digital world

Skill strand	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Electrical products	I can recognise that some products use batteries.				I can make and test a simple electrical product such as a torch.	I can use technology within a prototype where appropriate.	I can construct, test and refine a complete circuit in a functional product.
Digital monitoring and control	I can explore how simple technology responds to an action.					I can design, build and test a wearable technology device.	I can apply digital or electrical systems independently when relevant to a design.

8. COOKING AND NUTRITION – Food preparation

Skill strand	EYFS	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Food hygiene and safety	I can wash my hands and help prepare food safely.	I can use simple preparation tools hygienically with support.	I can cut, grate and spread ingredients safely.	I can prepare ingredients safely using appropriate techniques.	I can follow safe preparation routines when weighing and combining.	I can organise and cook hygienically with increasing independence.	I can plan and manage safe, hygienic preparation for a group or event.
Preparing and cooking	I can mix and combine familiar ingredients.	I can follow simple steps to make a smoothie.	I can assemble a healthy savoury wrap.	I can follow a recipe to make a seasonal tart.	I can adapt and test a biscuit recipe for flavour and texture.	I can plan, prepare and evaluate a pasta sauce collaboratively.	I can plan and prepare a selection of dishes for an afternoon tea.
Nutrition, ingredients and seasonality	I can talk about foods I enjoy and healthy choices.	I can choose fruit and explain that it contributes to a healthy diet.	I can choose ingredients for a balanced savoury dish.	I can select seasonal ingredients and explain where food comes from.	I can adapt ingredients to meet a user's taste and needs.	I can consider nutrition, sourcing and packaging when planning food.	I can plan a menu considering nutrition, presentation and the audience.
Sensory evaluation and presentation	I can say what food tastes or feels like.	I can describe a smoothie's taste and texture.	I can evaluate a wrap for taste, appearance and nutrition.	I can evaluate food using taste, texture and appearance.	I can test recipes and refine flavour, texture and presentation.	I can evaluate food with a target audience and communicate my decisions.	I can present dishes for an event and evaluate user feedback and teamwork.