



Let your light shine

DT progression

Big Idea	Aspect	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Humankind	Everyday products		Name and explore a range of everyday products and begin to talk about how they are used.	Name and explore a range of everyday products and describe how they are used.	Explain how an everyday product could be improved.	Explain how an existing product benefits the user.	Investigate and identify the design features of a familiar product.	Explain how the design of a product has been influenced by the culture or society in which it was designed or made.	Analyse how an invention or product has significantly changed or improved people's lives.
		Staying safe	Follow rules and instructions to keep safe.	Follow the rules to keep safe during a practical task.	Work safely and hygienically in construction and cooking activities.	Use appliances safely with adult supervision.	Work safely with everyday chemical products under supervision, such as disinfectant hand wash and surface cleaning spray.	Explain the functionality and purpose of safety features on a range of products.	Demonstrate how their products take into account the safety of the user.
Processes	Mechanisms and movement	Explore, build and play with a range of resources and construction kits with wheels.	Explore, build and play with a range of resources and construction kits with wheels and axles.	Use wheels and axles to make a simple moving model.	Use a range of mechanisms (levers, sliders, wheels and axles) in models or products.	Explore and use a range of mechanisms (levers, sliders, axles, wheels and cams) in models or products.	Explore and use a range of mechanisms (levers, axles, cams, gears and pulleys) in models or products.	Use mechanical systems in their products, such as pneumatics.	
	Electricity					Incorporate a simple series circuit into a model.	Incorporate circuits that use a variety of components into models or products.	Use electrical circuits of increasing complexity in their models or products, showing an understanding of control.	Understand and use electrical circuits that incorporate a variety of components (switches, lamps, buzzers and motors) and use programming to control their products.
Creativity	Generation of ideas	Develop their own ideas and explore a variety of resources, including blocks and construction kits to create 'small worlds' and objects linked to their interests.	Create collaboratively, share ideas and use a variety of resources to make products inspired by existing products, stories or their own ideas, interests or experiences.	Create a design to meet simple design criteria.	Generate and communicate their ideas through a range of different methods.	Develop design criteria to inform a design.	Use annotated sketches and exploded diagrams to test and communicate their ideas.	Use pattern pieces and computer-aided design packages to design a product.	Develop design criteria for a functional and appealing product that is fit for purpose, communicating ideas clearly in a range of ways.
		Structures	Make simple structures using a range of materials.	Construct simple structures and models using a range of materials.	Construct simple structures, models or other products using a range of materials.	Explore how a structure can be made stronger, stiffer and more stable.	Create shell or frame structures using diagonal struts to strengthen them.	Prototype shell and frame structures, showing awareness of how to strengthen, stiffen and reinforce them.	Build a framework using a range of materials to support mechanisms.

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	Use of ICT						Write a program to control a physical device, such as a light, speaker or buzzer.		Use a sensor to monitor an environmental variable, such as temperature, sound or light.
Investigation	Investigation		Choose and explore appropriate tools for simple practical tasks.	Select the appropriate tool for a simple practical task.	Select the appropriate tool for a task and explain their choice.	Use tools safely for cutting and joining materials and components.	Select, name and use tools with adult supervision.	Name and select increasingly appropriate tools for a task and use them safely.	Select appropriate tools for a task and use them safely and precisely.
	Evaluation	Share their creations with others and respond to questions and suggestions about how it was made.	Adapt and refine their work as they are constructing and making.	Talk about their own and each other's work, identifying strengths or weaknesses and offering support.	Explain how closely their finished products meet their design criteria and say what they could do better in the future.	Suggest improvements to their products and describe how to implement them, beginning to take the views of others into account.	Identify what has worked well and what aspects of their products could be improved, acting on their own suggestions and those of others when making improvements.	Test and evaluate products against a detailed design specification and make adaptations as they develop the product.	Demonstrate modifications made to a product as a result of ongoing evaluation by themselves and to others.
Materials	Cutting and joining textiles			Cut and join textiles using glue and simple stitches.	Use different methods of joining fabrics, including glue and running stitch.	Cut and join wools, threads and other materials to a loom.	Hand sew a hem or seam using a running stitch.	Combine stitches and fabrics with imagination to create a mixed media collage.	Pin and tack fabrics in preparation for sewing and more complex pattern work.
	Materials for purpose		Select appropriate materials when constructing and making.	Select and use a range of materials, beginning to explain their choices.	Choose appropriate components and materials and suggest ways of manipulating them to achieve the desired effect.	Plan which materials will be needed for a task and explain why.	Choose from a range of materials, showing an understanding of their different characteristics.	Select and combine materials with precision.	Choose the best materials for a task, showing an understanding of their working characteristics.
	Decorating and embellishing textiles			Use gluing, stapling or tying to decorate fabric, including buttons and sequins.	Add simple decorative embellishments, such as buttons, prints, sequins and appliqué.	Decorate a loom weaving using embellishments, such as natural or silk flowers, tassels and bows.	Create detailed decorative patterns on fabric using printing techniques.	Use applique to add decoration to a product or artwork.	Use different methods of fastening for function and decoration, including press studs, Velcro and buttons.

