



Progression of Skills Design and Technology



Big idea	Aspect	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Humankind	Everyday products	AOL: Exp A&D 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. I am Warrior Road Trip USA Misty Mountain, Winding River Blue abyss	Explain how the design of a product has been influenced by the culture or society in which it was designed or made. Stargazers	Analyse how an invention or product has significantly changed or improved people's lives.
	Staying safe	AOL: PSED AOL: PD 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. Muck, Mess and Mixtures Bounce	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	AOL: Exp A&D 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. Bounce	Explore and use a range of mechanisms (levers, sliders, axles, wheels and cams) in models or products. Mighty Metals	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.	Explain and use mechanical systems in their products to meet a design brief.
	Electricity	AOL: Exp A&D Identify products that use electricity to make them work.	Identify products that use electricity to make them work and describe how to switch them on and off.	Create an operational, simple series circuit.	Incorporate a simple series circuit into a model. Mighty Metals	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	AOL: Exp A&D 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. Paws, Claws and Whiskers Superheroes	Generate and communicate their ideas through a range of different methods. Muck, Mess and Mixtures Towers, Tunnels and Turrets Street Detectives	Develop design criteria to inform a design. Mighty Metals Tribal tails Gods and Mortals	Use annotated sketches and exploded diagrams to test and communicate their ideas. I am Warrior Burps, Bottoms and Bile	Use pattern pieces and computer-aided design packages to design a product. Stargazers	Develop design criteria for a functional and appealing product that is fit for purpose, communicating ideas clearly in a range of ways. ID Blood Heart
	Structures	AOL: Exp A&D Construct simple structures and models using a range of materials.	Construct simple structures, models or other products using a range of materials. The Enchanted Woodland Rio de Vida Dinosaur Planet Bright Lights, Big City	Explore how a structure can be made stronger, stiffer and more stable. Muck, Mess and Mixtures Towers, Tunnels and Turrets Coastline	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.	Select the most appropriate materials and frameworks for different structures, explaining what makes them strong. A Child's War Hola Mexico
	Use of ICT	AOL: Exp A&D Use digital devices to take digital images or recordings of their creations to share with others.	Use design software to create a simple plan for a design.	Use design software to create a simple labelled design or plan.	Write a program to make something move on a tablet or computer screen.	Write a program to control a physical device, such as a light, speaker or buzzer.	Link a physical device to a computer or tablet so that it can be controlled (such as changing motor speed or turning an LED on and off) by a program.	Use a sensor to monitor an environmental variable, such as temperature, sound or light.
Investigation	Investigation	AOL: PD Choose and explore appropriate tools for simple practical tasks.	Select the appropriate tool for a simple practical task. Rio de Vida Dinosaur Planet	Select the appropriate tool for a task and explain their choice.	Use tools safely for cutting and joining materials and components. Mighty Metals Gods and Mortals	Select, name and use tools with adult supervision.	Name and select increasingly appropriate tools for a task and use them safely. Pharaohs	Select appropriate tools for a task and use them safely and precisely.
	Evaluation	AOL: Exp A&D 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. Rio de Vida	Explain how closely their finished products meet their design criteria and say what they could do better in the future. Towers, Tunnels and Turrets	Suggest improvements to their products and describe how to implement them, beginning to take the views of others into account. Mighty Metals Tribal tails	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. Blue abyss Burps, Bottoms and Bile	Test and evaluate products against a detailed design specification and make adaptations as they develop the product. Stargazers	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	AOL: Exp A&D Select appropriate materials when constructing and making.	Select and use a range of materials, beginning to explain their choices. Paws, Claws and Whiskers The Enchanted Woodland Rio de Vida Dinosaur Planet	Choose appropriate components and materials and suggest ways of manipulating them to achieve the desired effect. Towers, Tunnels and Turrets Street Detectives Wriggle and Crawl	Plan which materials will be needed for a task and explain why. Mighty Metals Tribal tails Gods and Mortals Blue abyss Urban pioneers	Choose from a range of materials, showing an understanding of their different characteristics. I am Warrior Road Trip USA Misty Mountain, Winding River Burps, Bottoms and Bile Blue abyss	Select and combine materials with precision. Stargazers Pharaohs Time Traveller	Choose the best materials for a task, showing an understanding of their working characteristics. ID Blood Heart A Child's War Hola Mexico Revolution
	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.
Nature	Food preparation and cooking	AOL: Maths Follow instructions, including simple recipes, that include measures and ingredients.	Measure and weigh food items using non-standard measures, such as spoons and cups. Rio de Vida	Prepare ingredients by peeling, grating, chopping and slicing. Street Detectives Wriggle and Crawl	Prepare and cook a simple savoury dish.	Identify and use a range of cooking techniques to prepare a simple meal or snack. I am Warrior Road Trip USA	Use an increasing range of preparation and cooking techniques to cook a sweet or savoury dish.	Follow a recipe that requires a variety of techniques and source the necessary ingredients independently. Blood Heart



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		Dinosaur Planet						A Child's War Hola Mexico
	Nutrition	AOL: PSED Suggest healthy ingredients that can be used to make simple snacks.	Select healthy ingredients for a fruit or vegetable salad. The Enchanted Woodland Superheroes	Describe the types of food needed for a healthy and varied diet and apply the principles to make a simple, healthy meal. Muck, Mess and Mixtures	Identify the main food groups (carbohydrates, protein, dairy, fruits and vegetables, fats and sugars).	Design a healthy snack or packed lunch and explain why it is healthy. Burps, Bottoms and Bile	Evaluate meals and consider if they contribute towards a balanced diet.	Plan a healthy daily diet, justifying why each meal contributes towards a balanced diet. Hola Mexico
	Origins of food	AOL: World Begin to identify the origins of some foods.	Sort foods into groups by whether they are from an animal or plant source.	Identify the origin of some common foods (milk, eggs, some meats, common fruit and vegetables). Muck, Mess and Mixtures	Identify and name foods that are produced in different places.	Identify and name foods that are produced in different places in the UK and beyond.	Describe what seasonality means and explain some of the reasons why it is beneficial. Pharaohs	Explain how organic produce is grown.
Comparison	Compare and contrast	AOL: Exp A&D Describe what, why and how something was made and compare with others.	Describe the similarities and differences between two products.	Compare different or the same products from the same or different brands.	Explain the similarities and difference between the work of two designers.	Create and complete a comparison table to compare two or more products. Burps, Bottoms and Bile	Survey users in a range of focus groups and compare results.	Create a detailed comparative report about two or more products or inventions.
Significance	Significant people	AOL: Exp A&D Explore significant products.	Describe why a product is important.	Explain why a designer or inventor is important. Towers, Tunnels and Turrets	Describe how key events in design and technology have shaped the world.	Explain how and why a significant designer or inventor shaped the world. Blue abyss	Describe the social influence of a significant designer or inventor.	Present a detailed account of the significance of a favourite designer or inventor.