Summary: (Reception to Year 6)

The following tables summarise the progression of skills and knowledge in each strand from Reception to Year 6. It is designed to inform parents about how children's understanding and abilities develop over time.

BIG IDEA: Human Kind: Progression Summary

Concept	Staying Safe		Everyday Products	
Year Group	Key Knowledge	Skill Focus	Key Knowledge	Skill Focus
Reception	Rules help us stay safe when using things.	Follow rules and instructions to stay safe	Everyday products are things we use daily for specific purposes.	Name and explore everyday products
Year 1	Rules protect us from danger. Always listen, follow instructions, and use equipment only when told.	Follow safety rules during practical tasks	Learn about wheels, axles, vehicle frames (chassis), and shelters.	Name and describe everyday products
Year 2	Wash hands, clean surfaces, tie hair back, store food properly, and clean up spills.	Work safely and hygienically in cooking and building	Products can be made easier to use, stronger, or more attractive.	Suggest improvements to products
Year 3	Never touch sockets, keep cords away from water, and don't pull plugs by the cord.	Use electrical appliances safely with an adult	Products are designed for specific tasks, like helping plants grow.	Explain product benefits
Year 4	Everyday chemicals (like cleaning sprays and medicines) must be used with an adult.	Use household chemicals safely under supervision	Design features include materials and durability.	Identify design features
Year 5	Products like medicine bottles, seatbelts, and socket covers have safety features to prevent harm.	Explain safety features in products	Designs reflect the culture of users, like Greek architecture.	Explain cultural influence on design
Year 6	Include instructions, age guidance, safety features, warning signs, and electrical checks.	Design products with user safety in mind	Inventions like processed food and bridges have changed lives.	Analyse product impact on life

BIG IDEA: Processes: Progression Summary

Concepts:	Mechanisms and Movement		Electricity	
Year Group	**Core Knowledge**	**Skill Focus**	**Core Knowledge**	**Skill Focus**
Reception	Vehicles move using wheels and axles. An axle holds the wheel in place.	Explore and play with wheels and axles	Machines like microwaves and toasters need power to work.	Identify products that use electricity
Year 1	Vehicles have axles and wheels fixed to a frame (chassis).	Make a simple moving model with wheels and axles	Electricity powers appliances. Switches complete or break the circuit.	Describe how to switch electrical products on and off
Year 2	Machines help with tasks. Sliders move straight, levers pivot, and linkages combine parts.	Use levers, sliders, wheels and axles in models	A circuit needs a battery, wires, and a bulb. It must be complete to work.	Create a simple series circuit
Year 3	Cams change circular motion into up-and-down motion. Different shapes create different movements.	Use cams and other mechanisms in models	Circuits can be used in models like lighthouses and controlled with switches.	Use a series circuit in a model
Year 4	Simple machines make work easier. They include pulleys, levers, wheels and axles.	Use cams, gears and pulleys in models	Add bulbs, buzzers, motors, and switches to circuits for specific uses.	Use different components in circuits
Year 5	Pneumatics use air to move or lift things and absorb force.	Use pneumatic systems in products	Circuits can use switches or variable resistors like dimmers and volume controls.	Use complex circuits with control
Year 6	Systems include sliders, levers, gears, pulleys, cams, pneumatics and hydraulics.	Use mechanical systems to meet a design brief	Programs can control circuits with switches, lamps, buzzers, and motors.	Use circuits with programming

BIG IDEA: Creativity: Progression Summary

Concepts:	Generation of ideas		Structures		Use of ICT	
Year Group	Core Knowledge	Skill Focus	Core Knowledge	Skill Focus	Core Knowledge	Skill Focus
Reception	Sharing ideas and resources helps us work well with others.	Create collaboratively and share ideas using various resources	Bridges help people and vehicles cross spaces. Puppets can have moving parts, like finger puppets.	Construct simple structures and models using a range of materials.	Digital devices help share creations with others.	Use digital devices to take images or recordings

Year 1	Designs must meet goals to be successful.	Create a design to meet simple criteria	Materials are chosen based on their properties and purpose.	Construct simple structures, models or products using different materials.	CAD shows how products will look and lets you try colours and textures.	Use design software to create a simple plan
Year 2	Ideas can be shared through writing, drawing, speaking, and using technology.	Share ideas using different methods	Use cardboard instead of paper and triangular shapes for strength.	Explore how to make structures stronger, stiffer and more stable.	Software helps plan and solve problems before making a product.	Create a labelled design using software
Year 3	Designs must meet goals like use, look, cost, and user needs.	Develop design criteria	Diagonal struts form triangles that add strength and stability.	Create shell or frame structures using diagonal struts.	A program is a set of instructions for a computer task.	Write a program to make something move
Year 4	Drawings can show parts, functions, and details of a design.	Use sketches and diagrams to show ideas	A prototype is a mock-up that shows the design but may not be full size or final materials.	Prototype shell and frame structures with reinforcement.	Computers can control devices like lights or buzzers remotely.	Write a program to control a device
Year 5	CAD software helps design objects and can be used with 3D printers.	Use pattern pieces and CAD to design	Use triangles, columns, and brick patterns for strength. Mechanisms need strong structures to work.	Build frameworks to support mechanisms.	Devices like motors or LEDs can be controlled by programs.	Link a device to a computer for control
Year 6	Ideas can be shared through discussion, drawings, prototypes, and CAD.	Create functional and appealing designs and share ideas clearly	Strength comes from layers and shapes like triangles that resist collapse.	Select suitable materials and frameworks for strong structures.	Sensors record changes like temperature or light and log data.	Use sensors to monitor environment

BIG IDEA: Investigation: Progression Summary

Concepts:	Investigation		Evaluation	
Year Group	**Core Knowledge**	**Skill Focus**	**Core Knowledge**	**Skill Focus**
Reception	Different ways to join materials. Sewing uses needle and thread.	Choose and explore appropriate tools for simple practical tasks	Designs can be changed during making.	Adapt and refine work while making
Year 1	Foods need preparation: peeling, slicing, chopping, etc.	Select the appropriate tool for a simple practical task	Strengths are good parts; weaknesses are areas to improve.	Talk about strengths and weaknesses

Year 2	Tools have features that suit specific jobs, like knives for cutting.	Select the appropriate tool for a task and explain their choice	Check if product meets goals and plan improvements.	Evaluate finished product against design criteria
Year 3	Use saws, glue, nails safely. Follow safety rules like using bench hooks.	Use tools safely for cutting and joining materials and components	Ask questions to help evaluate and improve.	Suggest and describe improvements, consider others' views
Year 4	Use scissors, knives, glue guns safely with supervision.	Select, name and use tools with adult supervision	Evaluate function, appearance, and changes made.	Identify what worked and what could be improved
Year 5	Follow safety rules. Clean and store tools properly. Avoid damaged tools.	Name and select increasingly appropriate tools for a task and use them safely	Testing shows what needs improvement or redesign.	Test and evaluate against detailed design spec
Year 6	Understand garment construction and use hand stitches like running and whip stitch.	Select appropriate tools for a task and use them safely and precisely	Use iterative steps to improve product repeatedly.	Show modifications from ongoing evaluation

BIG IDEA: Materials: Progression Summary

Concepts:	Cutting and Joining Textiles		Materials for Purpose		Decorating and embellishing textiles	
Year Group	Core Knowledge	Skill Focus	Core Knowledge	Skill Focus	Core Knowledge	Skill Focus
Reception			Different materials are suitable for different purposes, such as construction kits for modelling and ingredients for baking.	Select appropriate materials when constructing and making		
Year 1	Use glue and basic running stitches to join fabric.	Cut and join textiles using glue and simple stitches.	Different materials are suitable for different purposes, depending on their specific properties. For example, glass is transparent, so it is suitable to be used for windows.	Select and use a range of materials, beginning to explain their choices	Decorations like buttons and sequins can be attached by gluing, stapling or tying.	Use gluing, stapling or tying to decorate fabric
Year 2	Use glue and running stitch to join fabric evenly.	Use different methods of joining fabrics.	Properties of components and materials determine how they can and cannot be used.	Choose appropriate components and materials and suggest ways of manipulating them to achieve the desired effect	Embellishments like buttons, prints, sequins and appliqué make fabric more attractive.	Add simple decorative embellishments

Year 3	Weaving means interlacing threads or materials.	Cut and join wools, threads and other materials to a loom.	Materials for a specific task must be selected on the basis of their properties. For example greenhouses need transparent or translucent materials. Availability and cost have also got to be considered.	Plan which materials will be needed for a task and explain why	Use items like flowers, tassels and bows to decorate woven fabric.	Decorate loom weaving with embellishments
Year 4	A hem is a neat edge made by folding and sewing fabric.	Hand sew a hem or seam using a running stitch.	Characteristics of materials, such as rigidity, strength and smoothness will affect the success of a working model. Visual qualities of a yarn can include its colour, elasticity, pattern and texture. Fabrics can be natural or synthetic. Natural fabrics include cotton, silk and wool. Synthetic fabrics include Lycra, polyester and nylon.	Choose from a range of materials, showing an understanding of their different characteristics	Block printing and fabric paint can make repeated patterns on fabric.	Create decorative patterns using printing
Year 5	Collages use different materials like fabric, ink, and paint.	Combine stitches and fabrics to create a mixed media collage.	Materials should be cut and combined with precision. For example, pieces of fabric could be cut with sharp scissors and sewn together using a variety of stitching techniques.	Select and combine materials with precision	Applique means attaching fabric pieces by stitching or gluing to decorate.	Use applique for decoration
Year 6	Pinning and tacking hold fabric together before sewing.	Pin and tack fabrics for sewing and pattern work.	It is important to understand the characteristics of different materials to select the most appropriate material for a purpose. This might include flexibility, waterproofing, texture, colour, cost and availability.	Choose the best materials for a task, showing an understanding of their working characteristics	Fastenings like zips, Velcro, and buttons hold clothing together and add decoration.	Use fastenings for function and decoration

BIG IDEA: Nature: Progression Summary

Concepts:	Food Preparation and Cooking		Nutrition		Origins of Food	
Year Group	Core Knowledge	Skill Focus	Core Knowledge	Skill Focus	Core Knowledge	Skill Focus
Reception	Recipes are instructions for making food. Special foods are eaten during celebrations.	Follow simple recipes with measures and ingredients	Fruit and vegetables are healthy. Recipes show how to make food.	Suggest healthy ingredients for snacks	Food comes from plants (fruit, vegetables, nuts, seeds) and animals (milk, eggs, honey).	Identify where some foods come from

Year 1	Fruits and vegetables make healthy salads. Dressings add flavour.	Measure and weigh using spoons and cups	Fruit and vegetables are important. Eat at least five portions daily.	Select healthy ingredients for a salad	Some foods come from animals (meat, fish, dairy) and some from plants (fruit, vegetables).	Sort foods by plant or animal source
Year 2	Ingredients need preparation before cooking or eating.	Peel, grate, chop and slice ingredients	A healthy diet includes meat/fish, starchy foods, dairy, fats, and lots of fruit and vegetables.	Describe foods for a healthy diet and make a meal	Milk from cows/goats, eggs from chickens/ducks, honey from bees, oils and sugar from plants.	Identify origins of common foods
Year 3	Use techniques like peeling, chopping, slicing, and mixing.	Prepare and cook a simple savoury dish	Five food groups: fruit/veg, carbs, protein, dairy, fats. Limit high fat/sugar foods.	Identify main food groups	Food growth depends on climate, rainfall, and soil. E.g., potatoes in SE England.	Name foods produced in different UK regions
Year 4	Techniques include baking, boiling, frying, grilling and roasting.	Use cooking techniques to prepare meals/snacks	Packaging keeps food fresh and safe. It also shows nutritional info.	Design a healthy snack or lunch	Certain regions grow specific crops, e.g., coffee in Peru, citrus fruits in California.	Name foods produced in UK and globally
Year 5	Sweet dishes are desserts; savoury dishes are salty or spicy.	Use more cooking techniques for sweet or savoury dishes	A balanced diet includes a variety of foods in the right amounts.	Evaluate meals for a balanced diet	Seasonal food is fresher, supports local growers, and reduces transport impact.	Explain seasonality and its benefits
Year 6	Ingredients can be bought from supermarkets or specialist shops like butchers and greengrocers.	Follow recipes using various techniques and source ingredients	Balanced diets are a lifestyle choice. Packaging shows nutritional info.	Plan a healthy daily diet	Organic foods are grown without artificial chemicals or additives.	Explain how organic food is grown

BIG IDEA: Comparison: Progression Summary

Concept	Compare and Contrast	
Year Group	Key Knowledge	Skill Focus
Reception	Children compare their creations with others, including what inspired them and how they made it.	Describe what, why and how something was made and compare with others
Year 1	Products can be compared using criteria and scored to find differences and similarities.	Describe similarities and differences between two products
Year 2	Look at features of products to decide which suits the purpose better.	Compare products from same or different brands

Year 3	Compare designers by visual impact, purpose, and audience.	Explain similarities and differences between two designers' work
Year 4	Use a table to organise and compare product features.	Create and complete a comparison table
Year 5	Ask users questions to evaluate how well a product meets its goals.	Survey users and compare results
Year 6	Compare products or inventions by impact, ease of use, look, and value.	Create a detailed comparative report

BIG IDEA: Significance: Progression Summary

Concept	Significant People	
Year Group	Key Knowledge	Skill Focus
Reception	Learn about useful products like scarecrows and why they are made.	Explore significant products
Year 1	Understand how products help us and why they are useful.	Describe why a product is important
Year 2	Recognise people like kitchen staff who help by designing meals.	Explain why a designer or inventor is important
Year 3	Learn how inventions have changed our lives.	Describe how key events in design and technology have shaped the world
Year 4	Discover how people like Louis Pasteur and William Morris made a difference.	Explain how and why a significant designer or inventor shaped the world
Year 5	Explore how designers like Vitruvius influenced buildings and society.	Describe the social influence of a significant designer or inventor
Year 6	Explain how engineers and inventors improved safety, lives, and trade.	Present a detailed account of the significance of a favourite designer or inventor