Progression Document for KS2 Design & Technology

Unit: Textiles: Fastenings					
Big Question	**National Curriculum Links**	**Core Knowledge**	**Disciplinary Knowledge**	**Key Vocabulary**	**Outcomes**
How can we design and make a useful textile product with a secure fastening?	Use research to inform design, develop design criteria, communicate ideas through sketches and templates, select suitable materials and tools, measure and cut accurately, evaluate existing products and finished designs, apply understanding of textile construction techniques.	Fastenings join or close materials, different fastenings have advantages and disadvantages, stitches join pieces of fabric, templates improve accuracy, design criteria identify what a product needs to achieve, prototypes help test designs before making.	Evaluate existing fastenings, develop design criteria, create annotated designs, make and test templates, measure and cut fabric accurately, sew fabric together, attach fastenings, evaluate finished products.	fastening, fabric, stitch, seam, template, prototype, criteria, button, zip, buckle	Design and make a functional book sleeve using an appropriate fastening and textile construction techniques.
Unit: Electrical Systems: Torches					
Big Question	**National Curriculum Links**	**Core Knowledge**	**Disciplinary Knowledge**	**Key Vocabulary**	**Outcomes**
How can we design and make a working torch?	Use research to inform design, develop design criteria, communicate ideas through annotated sketches, select suitable materials and components, make products accurately, understand and use electrical systems including switches, evaluate existing products and finished designs.	A torch is an electrical product, a complete circuit is needed for a bulb to light, circuits contain components including cells, wires and bulbs, switches open and close circuits, a torch casing protects and holds the electrical components.	Analyse existing products, develop design criteria, create annotated designs, construct electrical circuits, make switches, select suitable materials, assemble components accurately, test, evaluate and improve a finished product.	circuit, cell, bulb, switch, conductor, component, battery, torch, electrical, criteria	Design and make a functional torch containing a complete electrical circuit and working switch.
Unit: Mechanical Systems: Mechanical Cars					
Big Question	**National Curriculum Links**	**Core Knowledge**	**Disciplinary Knowledge**	**Key Vocabulary**	**Outcomes**
How can we use mechanical systems to design and make a moving car?	Use research to inform design, develop design criteria, communicate ideas through annotated sketches and exploded diagrams, select appropriate tools and materials, understand and use mechanical systems, test and evaluate products, refine designs using feedback.	Mechanical systems create movement, wheels rotate around axles, bearings support moving parts, different mechanisms can power movement, prototypes help test ideas, material choice affects cost, durability and sustainability.	Research existing products, develop design criteria, build prototypes, select tools and materials, measure and compare performance, create annotated and exploded diagrams, test mechanisms, gather feedback, evaluate and refine designs.	mechanism, mechanical system, chassis, axle, wheel, bearing, prototype, durability, sustainability, criteria	Design, make and evaluate a working mechanical toy car, applying knowledge gained from testing different prototypes.