Design & Technology Progression in Technical Knowledge & Skills

Construction **Year 1 - Houses**	Mark out shapes for a design. Use scissors to cut cardboard to the correct shape and size. Use the adhesive glue to attach cardboard so that it is fixed or detachable by the use of a hinge.	**Construction** **Year 3 – Picture Frames**	**Measure** and mark out shapes for a design. Use a **craft knife** and **steel ruler** to cut straight lines and cardboard to the correct shape and size. Make a free-standing structure stronger by increasing the strength of the material by rolling, twisting, layering and folding. Use a hot-melt glue from a glue gun to attach different materials together.	**Construction** **Year 6 – Bird Houses**	**Accurately** measure and mark out shapes for a design. Select the appropriate tool to cut wood to the correct shape and size. Develop a range of practical skills to create an attach products (such as cutting, drilling and screwing, nailing, gluing, filling and sanding).
Year 1 - Playgrounds	Make a free-standing structure stronger by increasing the width of its frame.			**Year 5 – Bridges**	Choose suitable techniques to construct products or to repair items. Strengthen materials using suitable techniques.
Mechanics **Year 1 – Moving Pictures**	Add a simple moving mechanism using a lever to a picture.	**Mechanics** **Year 3 – Moving Monsters**	Make a product with a pneumatic system.	**Mechanics** **Year 5 – African Instruments**	Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product. Make a product with changeable sound.
Year 2 – Fire Engines	Produce a product that is moveable via wheels on an axle.	**Year 4 – Moving Pictures**	Make a product with a moving element such as a concertina, pop-out object, window flap, rotating wheel to lever – i.e. something that rotates, pivots, pushes or pulls or has a linkage system using rods, springs or a series of bars.		
Textiles **Year 2 - Puppets**	Draw a design out on the textile. Use scissors to cut out a textile design. Join textiles using a running stitch. Decorate textiles by adding sequins, printing or colour.	**Textiles**	---	**Textiles** **Year 5 – Funky Furnishings**	Create objects (such as a cushion) that employ a seam allowance. Join textiles with a combination of stitching techniques (such as back stitch for seams and running stitch to attach decoration). Use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles (such as a soft decoration for comfort on a cushion).
Food **Year 2 – Pizzas**	Cut ingredients safely and hygienically. Measure or weigh using measuring cups. Assemble or cook healthy ingredients. Have a basic understanding where food comes from.	**Food** **Year 3 – Sandwich Snacks**	Cut, **slice, peel or grate** ingredients safely and hygienically. Measure or weigh using measuring cups or **electronic scales.** Assemble or cook healthy ingredients – **follow a recipe.** Explore the look, taste, smell and texture of food. Understand the food pyramid and what food does for the body.	**Food** **Year 6 – Burgers**	Cut, slice, peel or grate, **mix & blend** ingredients safely and hygienically. Understand the importance of correct storage and handling of ingredients. Measure accurately and calculate ratios of ingredients to scale up or down from a recipe. Demonstrate a range of baking and cooking techniques. **Create** and **refine recipes**, including healthy seasonal ingredients, methods, cooking times and temperatures. Understand how a variety of ingredients are grown, reared, caught and processed. Understand and apply principles of a healthy an varied diet.
		Year 4 – Seasonal Food	Understand where food comes and that some foods are seasonal. Identify seasonal fruits and vegetables and explain what prevents these from growing all year round. Explain how to preserve a fruit or vegetable. Identify foods that can be grown all year round in the UK. Produce a seasonal menu.		
Electronics / Computing	Learn how the siren on a fire engine works – (Simple Circuit / Use of a battery)	**Electronics / Computing** **Year 4 - Alarms**	Design and create simple and parallel circuits. Select the most appropriate switch to trigger the alarm i.e. push-to-break, push-to-make, tilt, on/off switches.	**Electronics / Computing** **Year 6 – Programming Pioneers**	Create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips.) Programme a circuit using a Scratch Code Programme.