Wallsend Jubilee Primary School
Skills Progression: Design Technology

Strands	Nursery	Reception	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Design	Plan and think ahead about how they will explore or play with objects.	To decide in advance what they are going to make and select the tools they need to achieve particular effects. Set a goal and say what they need to achieve it Ask questions to expand response or to understand more about what has been said. Can take a simple resource and create a planned model, which has a particular purpose.	To design products that have a clear purpose and are appealing for themselves. To explore objects and designs to identify likes and dislikes. Develop and communicate their ideas through talking. Model their ideas through drawing.	Design purposeful, functional and appealing products for other users based on design criteria. To explore objects and designs and make suggestions of improvements to the existing design. Generate, develop and communicate their ideas through templates. Model their ideas through ICT.	Begin to draw on their own experience to help generate ideas and develop design criteria. Design innovative products that have a clear purpose and intended user. Generate, develop model and communicate their ideas through discussion and annotated sketches. Understand how well products have been designed and made and what materials have been used.	Begin to draw on their own experience and research to help generate ideas and develop design criteria. Design innovative and appealing products that have a clear purpose and intended user. Generate, develop model and communicate their ideas through discussion and cross-sectional diagrams.	Identify a purpose and establish a criteria for a successful product. Design innovative and functional products that are fit for purpose and have an intended user. Generate, develop model and communicate their ideas through discussion, exploded diagrams and prototypes.	Begin to use research and develop design criteria to inform the design of innovative, functional and appealing products that are fit for purpose. Generate, develop model and communicate their ideas through discussion and computer-aided design.
Make	Can use a range of tools competently. Shows a preference for a dominant hand. Use pincer movements to pick up small objects or nip malleable materials. Join materials together using tape and glue. Link construction materials together, ascribing	Uses simple tools such as scissors, hole punches, staplers screwdrivers, safely and effectively. Uses a variety of joining techniques and is able to select resources based on purpose e.g. a stapler for a more robust join. Create more complex structures on a large and small scale.	Select from and use a range of tools and equipment to perform practical tasks e.g. scissors, hole punch and stapler. Select from and use a wide range of materials including construction materials according to their characteristics. Begin to join materials using a variety of temporary methods eg. masking tape.	Select from and use a range of tools and equipment to perform practical tasks. Demonstrate how to cut, shape and join fabric to make a simple product using basic sewing techniques. To measure and mark out to the nearest centimetre and demonstrate a range of cutting, shaping and joining techniques. Select from and use a wide range of materials including	Select from and use a range of tools and equipment to perform practical tasks eg. nailing and screwing. Select from and use a wider range of materials and components, including construction materials and ingredients according to their functional purpose. To select appropriate joining techniques.	Select from and use a range of tools and equipment to perform practical tasks eg. cutting and gluing and sewing. Select from and use a wider range of materials and components, including textiles and ingredients, according to their functional properties and aesthetic qualities. To select appropriate joining techniques.	Select from and use a range of tools and equipment to perform practical tasks eg. cutting, nailing, screwing, filing, and sanding. Select from and use a wider range of materials and components, including construction materials and ingredients, according to their functional properties and aesthetic qualities.	Select from and use a range of tools and equipment to perform practical tasks accurately eg.cutting, nailing, screwing, filing, sanding and drilling. Select from and use a wider range of materials and components, including construction materials and ingredients according to their functional properties and aesthetic qualities.

	meaning to structures. Build on a large and small scale, including towers and enclosures, both indoors and outdoors, ascribing meaning to their structures. Collect particular materials for a purpose. Weave material into frames. Choose and locate the resources needed to achieve a goal. Explore materials freely in order to develop ideas about how to use them and what to make.	Stack, align and balance with open ended bricks and blocks on a range of scales, with a purpose in mind. Thread, peg, weave and sew. Join and separate small construction kit components by clicking and twisting.		textiles and ingredients, according to their characteristics.				
Evaluate	Can say something they like about a structure. Use simple construction kits with a purpose and describe their models. Answer simple why questions.	Articulate the reasons for success or failure in a challenge. Talks about the process in which a model was made and give reasons why. Refine approaches to design work when problems are encountered. Can say what they do / don't like about a structure.	Explore and evaluate a range of existing products.	Evaluate their ideas and products against design criteria.	Investigate a range of existing products.	Evaluate their ideas and products (strengths and areas for development) against their own design criteria. Understand how key events and individuals in design have helped shape the world.	Investigate and improve upon existing designs and give reasons for their choices. To disassemble products to understand how they work.	Evaluate their ideas and products (strengths and areas for development) against their own design criteria and consider the views of others to improve their work. To refine work and techniques as the work progresses, continually evaluating the product design.

		Formulate and respond to how and why questions. Explain how things work and why things might happen.						
Technical Knowledge	Explore how things work (such as pulleys, mechanical equipment). Demonstrate how to achieve a particular goal with mechanical toys or pulley systems. .	Dismantle objects and mechanisms using a range of hand actions. Use a range of tools to dismantle mechanisms.	Begin to build structures looking at how they can be made stronger, stiffer and stable. Explore and use mechanisms in their products e.g. sliders.	Explore and use mechanisms in their products e.g. leavers and pivots.	Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Understand and use mechanical systems in their products eg. pulleys.	Understand and use mechanical systems in their products eg. wheels and axis.	Understand and use mechanical systems in their products eg. cams.	Understand and use mechanical systems in their products. Understand and use electrical systems in their products. Apply their understanding of computing to program, monitor and control their products.
Cooking and Nutrition	Uses tools such as cutters and knives. Talk about the differences between materials and the changes they notice - (cooking, melting, light/dark, sink/float, shadows). Identify healthy choices about food, drink, activity and toothbrushing. Make playdough alongside an adult, following an instruction. Prepare and cook simple recipes alongside an	Make healthy snacks. Identify favourite foods and say which one will keep me healthy and which are to be eaten in moderation. Choose ingredients suited to healthy snacks. Know and talk about the different factors that support their overall health and well being. Makes playdough, following sets of instructions, with an adult nearby for support.	Understand where food comes from.	Use the basic principles of a healthy and varied diet to prepare dishes.	Understand seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed. Prepare savoury dishes while beginning to understand how to use a range of techniques such as peeling, chopping and mixing.	Prepare savoury dishes while beginning to understand how to use a range of techniques such as slicing and grating. To be able to follow a recipe.	Prepare and cook savoury dishes while beginning to understand how to use a range of techniques such as kneading and baking and apply these using a heat source where appropriate. To be able to create a recipe.	Understand and apply the principles of a healthy and varied diet. Prepare and cook savoury dishes while understanding how to use a range of techniques such as slicing, chopping, mixing, peeling, grating, kneading and baking and apply these using a heat source where appropriate. To create and refine recipes with thought to cost and health and demonstrate a range of baking and cooking techniques.

	adult, following their instruction.	Safely use a wider range of food preparation tools including chopping boards and knives, Is able to use own experience of planting and harvesting to know that some food comes from the ground Prepare and cook simple recipes such as cakes, biscuits and soup alongside an adult but with increasing independence Describe changes of state.						
Organisation and Communication			**<u>Me and My Home - Autumn</u>** To build a structure of a house using various materials. **<u>Toys - Spring</u>** To design and make a toy using a slider mechanism. **<u>My Local Area/UK - Summer</u>** To visit the Rising Sun Country Farm to understand where food comes from.	**<u>Great Fire of London - Autumn</u>** To design and make a Christmas card using a leaver and pivot. **<u>Our World - Spring</u>** To design and make a patchwork blanket to be displayed in school/local Care Home. **<u>Seaside - Summer</u>** To design and make a savoury picnic suitable to be taken to the Seaside.	**<u>Stone Age - Autumn</u>** To make flour using Stone Age tools and prepare and cook bread. **<u>Ancient Egyptians - Spring</u>** To create a pulley system to aid the erection of the pyramids. **<u>The United Kingdom - Summer</u>** To create a structure to replicate a famous UK monument.	**<u>Romans - Autumn</u>** To design and create a range of textile products that can be sold as part of an enterprise week. **<u>Victorians - Spring</u>** To design and create a horse drawn carriage using wheels and axis. **<u>Italy - Summer</u>** To follow a recipe to make an Italian Salad	**<u>Greeks - Autumn</u>** To design, create and evaluate a Parthenon. **<u>Anglo-Saxons - Spring</u>** To follow instructions to bake Anglo Saxon bread. **<u>Europe -Summer</u>** To create an automata window display.	**<u>Bridges, Rivers and Industry - Autumn</u>** To create and refine a recipe. **<u>Vikings - Spring</u>** To create a woodwork puppet. **<u>Bridges, Rivers and Industry - Summer</u>** To design and make a car using mechanical systems.
Overarching vocabulary	Build, tools, scissors, stapler, hole punch, materials, structure ,shape, make, prepare, cook, healthy, stronger, stiffer, cut, join.		Communicate, design, evaluate, mechanism, tools, healthy, structure, stronger, stiffer, stable, improve, generate, finishing, sewing, templates, join, cut, sliders, leavers,pivots.		Experience, research, generate, develop, techniques, peeling, cutting. Evaluate, reinforce, criteria, recipe, materials, functional, appealing, aesthetics, purpose, audience, mechanism, seasonality, pulley, wheel and axis.		Design, generate, criteria, slicing, chopping, mixing, peeling, grating, kneading, baking, recipe, aesthetics, improve, healthy and varied diet, heat source, programme, mechanisms, electricals., innovative, computer aided design, components.	