



## Skills Ladder - D & T

	EYFS	Puffin - Year 1/2		Swift Year 3/4		Eagle Year 5/6		
<b>Design: Developing planning and communicating ideas</b>	<p>Safely use and explore a variety of materials, tools and techniques, experimenting with colour, design, texture, form and function.</p> <p>Share their creations, explaining the process they have used.</p> <p>Make use of props and materials when role playing characters in narratives and stories.</p>	Explain what they are making and which materials they are using.	Use pictures and words to convey what they want to design and make.	Draw/sketch products to help analyse and understand how products are made.	Investigate similar products to the one to be made to produce own design criteria.	Investigate products/images to collect ideas and create own design criteria.		
		Select materials from a limited range that will meet the design criteria.	Select appropriate technique explaining First, next, last.	Think ahead about the order of their work and decide upon tools and materials.	Plan a sequence of actions to make a product.	Sketch and model alternative ideas.		
		Select and name the tools needed to work the materials.	Explore ideas by rearranging materials.	Record the plan by drawing (labelled sketches) or writing.	Develop more than one design or adaptation of an initial design.	Develop one idea in depth.		
		Produce a mock-up with kits or reclaimed materials.	Describe their models and drawings of ideas and intentions.	Communicate their ideas through discussion and add notes to drawings to help explanations.	Propose realistic suggestions as to how they can achieve their design ideas.	Combine modelling and drawing to refine ideas.		
		Use drawings to record ideas as they are developed and talk about them.	Produce a mock-up with kits / reclaimed materials or ICT.		Produce annotated sketches.	Plan the sequence of work using a storyboard.		
		Design a product for a given purpose.	Add notes to drawings to help explanations.	Make prototypes.	Record ideas using annotated diagrams.	Record ideas using annotated diagrams.		
		Select pictures to help develop ideas.	Design a product from a detailed design criteria.			Design innovative, functional appealing products that are fit for purpose that are aimed at particular individuals or groups.	Use models, kits and drawings to help formulate design ideas.	
		Use drawings to record ideas as they are developed.					Make prototypes.	
		Discuss their work as it progresses.		Use found information to inform decisions.				
						Use a computer aided design to model ideas.		
				Design innovative, functional, appealing products that are fit for purpose that are aimed at particular individuals or groups.	Draw plans which can be read / followed by someone else.			
				When designing produce cross sectional and exploded diagrams.	Give a report using correct technical vocabulary.			
					Design innovative, functional, appealing products that are fit for purpose that are aimed at particular individuals or groups.			
					When designing produced patterned pieces.			
<b>FOOD Working with tools, equipment, materials and components to make quality products.</b>	Develop a food vocabulary using taste, smell, texture and feel.	Cute peel, grate, chop a range of ingredients.	Develop sensory vocabulary / knowledge using smell, taste, texture and feel.	Analyse the taste, texture, smell and appearance of a range of foods.	Select and prepare foods for a particular purpose.	Prepare food products taking into account the properties of ingredients and sensory characteristics.		
	Group familiar food products e.g. fruit and vegetables.		Follow instructions.					Taste a range of ingredients, food items to develop a sensory food vocabulary for use when designing.
	Work safely and hygienically.		Work safely and hygienically.		Work safely and hygienically.			
	Understand the need for a variety of foods in a diet.	Understand the need for a variety of foods in a diet.	Make healthy eating choices from and understanding of a balanced diet.		Show an awareness of a healthy diet from an understanding of a balanced diet.	Understand how to feed themselves and others affordably now and in the future.		
Understand where food comes from.	Cut and shape ingredients using appropriate tools and equipment e.g. grating.							

	Work with an adult to make food following a simple recipe.	Measure and weight food items, non-statutory measures e.g. spoons, cups.	Join and combine a range of ingredients e.g. snack foods.	Measure and weigh ingredients appropriately.	Weigh and measure using scales.		
		Follow a recipe to make food with increasing independence.	Prepare and cook a range of predominately savoury dishes using a range of cooking techniques.		Join and combine food ingredients appropriately e.g. beating, rubbing in.		
<b>CONSTRUCTION</b> Working with tools, equipment, materials and components to make quality products.	Use a range of materials to create models.	Attach wheels to a chassis using an axle.	Make structures more stable by giving them a wide base.	Measure and mark square selection, strip and dowel accordingly to 1cm.	Use hand drill to drill tight and loose fit holes.	Use a bradawl to mark hole positions.	
		Use a range of materials to create models with wheels and axles e.g. tubes, dowel, cotton reels.	Prototype frame and shell structures.	Create shell or frame structures strengthen frames with diagonal struts.	Cut strip wood, dowel, square section wood accurately to 1mm.	Build frameworks using a range of materials e.g. wood, card, corrugated plastic to support mechanisms.	
	See glue gun used by an adult.	Join appropriately for different materials and situations e.g glue tape.	Use glue gun with close supervision (one to one).	Incorporate a circuit with a bulb or buzzer into a model.	Use glue gun with close supervision.	Choose materials based on their functional properties and aesthetic qualities.	
	Talk about how structures can be made stronger.	Mark out materials to be cut using a template.	Investigate how structures can be made stronger, stinger and more stable.	Choose materials based on their functional properties and aesthetic qualities.	Join materials using appropriate methods.	Apply their understanding of how to strengthen, stiffen more complex structures.	
		Cut strip wood / dowel using hacksaw and bench hook.			Incorporate motor and a switch into a model.	Understand and use mechanical systems in their products e.g. gears, pulleys, cams, levers and linkages.	
					Control a model using an ICT control programme.		
				Use a cam to make an up and down mechanism.			
				Choose materials based on their functional properties and aesthetic qualities.			
	<b>TEXTILES</b> Working with tools, equipment, materials and components to make quality products.	Colour fabrics using a range of techniques e.g. fabric paints, printing, painting.	Join fabrics by using running stitch, glue, staples, over seeing, tape.	Create a simple pattern.	Prototype a product using a fabric.	Understand pattern layout.	Create 3D products using pattern pieces and seam allowance.
		Cutout shapes which have been created by drawing round a template onto the fabric.	Decorate fabrics with buttons, beads, sequins, braids, ribbons.	Understand the need for patterns.	Use appropriate decoration techniques e.g. appliqué (glued or simple stitches)	Decorate textiles appropriately often before joining components.	Pin and tack fabric pieces together.
Understand seam allowance.							
Join fabrics using running stitch, over sewing, back stitch.					Combine fabrics to create more useful properties.	Join fabrics using over sewing, back stitch, blanket stitch or machine stitching.	
Explore fastenings and recreate some e.g. sew on buttons and make loops.					Make quality products.		
<b>SHEET MATERIALS</b> Working with tools, equipment, materials and components to make quality products.	Fold, tear and cut paper and card.	Insert paper fasteners for card linkages.	Cut slots.	Use linkages to make movement larger or more varied.	Cut slots.	Use craft knife, cutting mat and safely ruler under one to one supervision.	
	Roll paper to create tubes.	Create hinges.	Cut internal shapes.		Cut accurately and safely to a marked line.		
	Cut along lines, straight and curved.	Use simple pop ups.	Use lolly sticks / card to make levers and linkages.	Use and explore complex pop ups.	Join and combining materials with temporary, fixed or moving joinings.		
	Curl paper.	Investigate strengthening sheet materials.	Create nets.		Choose an appropriate sheet material for the purpose.		
	Use hole punch.	Investigate joining temporary, fixed and moving.					

<b>Evaluating processes and products</b>	Say what they like and do not like about items they have made and attempt to say why.	Talk about their designs as they develop and identify good and bad points.	Identify the strengths and weaknesses of their design ideas.	Discuss how well the finished product meets the design criteria and how well it meets the needs of the user.	Use the design criteria to inform their decisions about what's to proceed.	Reflect on their work using design criteria stating how well the design fits the needs of the user.
	Talk about their designs as they develop and identify good and bad points.	Talk about changes made during the making process.	Decide which design idea to develop.		Justify their decisions about materials and methods of construction.	
	Talk about changes made during the making process.	Discuss how closely their finished products meet their design criteria.	Consider and explain how the finished product could be improved.		Identify what does and does not work in the product.	
				Make suggestions as how their or others design could be improved.		
	Explore and evaluate a range of existing products.		Investigate and analyse a range of existing products.	Investigate and analyse a range of existing products.		