

DT Knowledge and Skills

Learning Journey:	1.Research & Evaluate existing products.	2.Design & Prototype	3.Skills (make product)	4.Evaluate product	Knowledge	Job Aspirations and Famous Person, opportunities for reading in DT (using AURR?)
Year 1 Bookmarks	Problem: Want to know which page I am up to in my bedtime book? Product: bookmark Existing products. Which ones do you like?	Draw own design onto a given template	Select and cut fabrics for sewing Thread a needle with support Sew running stitch to show a design on fabric	Likes and dislikes of own work	Why do we draw a design idea? Drawing a design idea is useful to see how an idea will look What is the hole in a needle called? An eye Why do you need to tie a knot after sewing the final stitch? So the stitches don't become undone	Job: seamstress, tailor, designer, embroiderer Famous person: Elie Saab
Year 2 Stockings	Problem: Need somewhere for Father Christmas to put your presents Product: Stocking Existing products. Which ones do you like and why?	Draw own design onto a template with labels	Thread a needle with more independence Select and cut fabrics for sewing Sew running stitch, with evenly spaced, neat, even stitches to join fabric (Could use alternative joining technique for some of the product eg stable one side).	Likes and dislikes of others' work	What is a 'joining technique'? A 'joining technique' is connecting two pieces of material together What are some different types of joining techniques? Stapling, pinning, gluing What different stitches can be used when sewing? Running stitch- an up-an-down stitch	Job: seamstress, tailor, designer Famous person: Coco Chanel (in Little People Big Dreams book)
Year 3 Pneumatic toy	Problem: I need a small toy to give to a friend as a Christmas present Product: Toy Existing products. Which would be good for Y3 age child?	Annotate own thumb-nail sketch	Build secure housing for a pneumatic system Create a pneumatic system to create a desired motion. I can make my own hinges.	Evaluate own work against set criteria	What is a mechanism? A system of parts that work together to create motion. How does a pneumatic system work in a mechanism? A pneumatic system can force air over a distance to create movement. What are three examples of mechanisms that use pneumatics? Bus doors, office chairs, roller coasters	Job: inventor, product designer, market researcher Famous person: Mary Anderson (inventor of windscreen wipers)

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Year 4 Electronic Card	Problem: I want a special Christmas card for a family member Product: electronic card Existing: look at a range of Christmas cards (light up, singing, moonpig)	Draw own design as an exploded diagram	Build a simple circuit that includes a bulb. Mount the final design to make it stiffer and stronger.	Evaluate others' work against set criteria	What is an electrical system? An electrical system is a group of parts (components) that transport electricity around a circuit. What is an electrical product? An electrical product is an object that uses an electrical system to carry electricity around to make its different parts work Can you give an example of an electrical product? Kettle, remote, toaster.	Job: CAD, illustrator, Famous person: Swan/Edison/Tesla- inventors of the lightbulb
Year 5 Tote bag	Problem: You need a bag to carry all your Christmas cards in Product: Tote bag Existing bags: evaluate bags against a <i>fit-for-purpose</i> criteria	Template with paper and stapler, produce a pattern	Make and test a paper template with accuracy and in keeping with the design criteria Measure, mark and cut fabric using a paper template Select a stitch style to join fabric Work neatly by sewing small, straight stitches	Evaluate against an agreed criteria, deciding how many criteria need to be met for the product to be considered successful.	What is a template? A template (or fabric pattern) is used to cut out the same shape multiple times Why do you need a seam allowance? To ensure your product is big enough What types of stitches do you know? Running, cross stitch	Job: seamstress, tailor, designer Famous person: Vivienne Westwood (In Little People, Big Dreams book)
Year 6 Steady Hand Game	Problem: Need a fun toy for a child to practise fine motor skills Product: Steady hand game Existing: Articulate the advantages and disadvantages of different games against a <i>form follows function</i> criteria	Exploded diagram Prototype of structure	I can use tabs to secure the pieces of the net in place. I can ensure that the sides of the base are aligned when glued. I can accurately cut and assemble a net I can incorporate a circuit into a base.	Evaluate against an agreed criteria, deciding how many criteria need to be met for the product to be considered successful. Consider if the form was correct for the toy to function correctly.	What is a net? What a 3D shape would look like if it was unfolded. What is meant by 'fit for purpose'? A product works how it should and is easy to use. What is meant by 'form over function'? The product must be designed primarily with the function in mind	Job: product designer, market researcher, occupational therapist Famous person: Ole Kirk Kristiansen (inventor of Lego)

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