Year 4: D&T

Designing and Evaluating	Making	Cookery and Nutrition
D1 I can design with purpose by identifying opportunities to design and justify my choices.	**M1 Materials** I can measure and mark out to the nearest mm	**C1** I can follow a recipe.
D2 I can make products by working efficiently and with precision (such as by carefully selecting from a wide range of materials and tools.)	**M2 Materials** I can cut materials accurately and safely by selecting appropriate tools.	**C2** I can prepare ingredients hygienically selecting and using appropriate utensils.
D3 I can refine work and techniques as work progresses, continually evaluating the product design.	**M3 Materials** I can apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots or cut outs).	**C3** I can measure ingredients to the nearest gram.
D4 I can use software to design and represent product designs including labels.	**M4 Materials** I can select appropriate joining techniques – running, cross and back stitch.	**C4** I can assemble and cook ingredients (controlling the temperature of the oven or hob if cooking).
D5 I can identify some of the great designers in all of the areas of study (including pioneers in sustainability) to generate ideas for designs.	**M5 Textiles** I can select the most appropriate techniques to decorate textiles.	
D6 I can disassemble products to understand how they work.	**M6 Textiles** I can understand the need for a seam allowance.	
	M7 Textiles I can join textiles with appropriate stitching.	
	M8 Electricals and electronics I can recognise if a battery operated device works or not.	
	M9 Electricals and electronics I can diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage).	
	M10 Electricals and electronics I can create series circuits.	
	M11 Electricals and electronics I can create parallel circuits.	
	M12 Computing I can monitor models using software designed for this purpose.	
	M13 Computing I can control models using software designed for this purpose.	

Year 4 topic coverage

Autumn Electricals and Electronics	Spring Textiles	Summer Computing Cookery and Nutrition
D1, D2, D3, D5 M8, M9, M10, M11	D1, D2, D3, D6 M1, M2, M3, M4, M5, M6, M7	D1, D2, D3, D4 M12, M13 C1, C2, C3, C4
Vocabulary	**Vocabulary**	**Vocabulary**
Electricals and electronics battery operated, device, diagnose, faults, battery terminal, series, parallel, circuit, wires, crocodile clips, battery, bulbs, motors, buzzers.	**Materials** millimetre, accuracy, perimeter, finishes **Textiles** Textiles, back stitch, cross stitch, seam and seam allowance.	**Computing** monitor, observe, model, software.
Designing and Evaluating: disassemble, cross section, prototype, innovative, functional, precision, sustainability		
I will know	**I will know**	**I will know**
Electricals and electronics - How to test to see if a battery-operated device is working or not. - How to find a fault with a battery-operated device. - That a series circuit is one that has more than one resistor (light bulbs), but only one path through which the electricity flows. - How to build and test a series circuit.	**Materials** - How to use a ruler/tape measure to measure to the nearest mm. - How to mark fabric. - That the different tools for cutting and shaping give different finishes. - How to use the tools to cut and shape material accurately.	**Computing** - That models can be monitored using computer software. - The name of the software that I can use to monitor a model. - How to use computer software to monitor a model.

- That a parallel circuit is one that has more than one resistor (light bulbs, buzzer etc), and more than one path (usually two) through which the electricity flows.
- How to build and test a parallel circuit.

- How to use the tools safely when cutting and shaping material.
- How to cut to create slots or cut-outs within the perimeter of the material.
- How to choose the most appropriate method of joining materials (gluing, stitching etc). in the context of the product that I am making.

Textiles
- How to decorate textiles using different mediums.
- How to select the most appropriate technique to apply decorations to fabrics.
- How to thread a wide eyed needle.
- How to stitch materials together- running, cross and back stitch.
- How to select the most appropriate method of stitching to join the materials together with increasing accuracy and neat finish.
- That a seam allowance is the area between the edge of the fabric and the stitching line when joining two pieces of material together.
- That without taking into consideration a seam allowance, the material that you cut to make a product may be too small.

- That models can be controlled using computer software.
- The name of the software that I can use to control a model.
- How to use computer software to control a model.

Cookery and Nutrition- Opportunity to revisit Year 3 skills
- How to follow a recipe.
- How to select and use the most appropriate utensil to prepare ingredients for the meal that I am making e.g. grater, knife etc.
- How to weigh ingredients to the nearest gram using electronic scales or analogue scales accurately.
- How to assemble and cook food safely and hygienically.
- How to use cooking equipment such as the microwave, hob, or oven.
- How to control the temperature of the hob/oven when being used.

Designing and Evaluating:
- How to research and identify opportunities to develop designs.
- How to disassemble products to understand how they work.
- How to work efficiently with precision.
- How to generate and communicate own designs through cross sectional diagrams.
- How to design using a prototype.
- How to look at and discuss current designs with some criticality.
- How to discuss my own and others current designs with some criticality.
- How to use work and ideas from great designers to generate ideas for my own designs.
- How to adapt, change and refine designs to improve them.
- How to refine my design as I work and give reasons for the changes to my design.
- How to evaluate my own product against my own design criteria and take on board the ideas of others.
- How to use work and ideas from great designers to generate ideas for my own designs, including pioneers in sustainability
- How to design a product, including the use of labels, using computer software.
- How to represent a product, including the use of labels, using computer software.