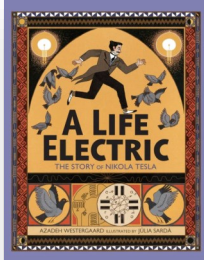
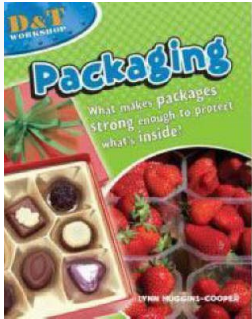
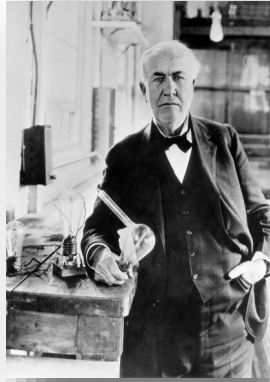




YEAR 4

**DESIGN & TECHNOLOGY
CURRICULUM**

Year 4 D&T - Broader Curriculum Aims and Objectives

Key Themes	Topics of Study	
<ul style="list-style-type: none"> • Food Technology • Textiles • Electrical Systems 	<ul style="list-style-type: none"> • Adapting a recipe - Alternative Biscuits • Fastenings - Book Sleeve • Electrical systems - Torches 	
Key D&T Knowledge and Understanding	Vocabulary	
<ul style="list-style-type: none"> • Know why each of the food groups is important for a balanced diet. • Know the importance of clearly stating ingredients on packaging for nutrition and allergy safety. • Know how to identify which food group a variety of alternative biscuit ingredients belong to. • Know about the different sensory characteristics of these alternative ingredients. • Know that different fabrics have different properties which makes them good for different purposes. • Know that there are a variety of different stitches that can be used to join fabrics together. Some are easier and quicker e.g. running stitch; some are more secure e.g. backstitch and others are more aesthetically pleasing e.g. blanket stitch. • Know that aesthetics is highly important in textiles. • Know the different components within an electrical circuit in a torch and what their function is. • Know how to create a labelled diagram of the inside and outside of a torch to show the pathway of the electricity. • Know about the different types of switches used within torches and how they work. • Know how to create their own electrical circuit and how to incorporate it into a functional product e.g. a torch. • Know how to work safely with electrical components. 	<p>Adapt, equipment, evaluation, flavour, ingredients, method, net, packaging, prototype, quantity, recipe, target audience, unit of measurement. Aesthetic, air resistance, chassis, design, design criteria, function, graphics, kinetic energy, mechanism, net, structure. Cladding, frame structure, inspiration, pavilion, reinforce, stable, texture, theme. Assemble, fabric, fastening, running stitch, stencil, template. Battery, bulb, buzzer, cell, conductor, copper, electrical item, insulator, series circuits, switch, test, wire.</p>	
	Quality Literature Links	Ground Breaking Products
	 	 <p style="text-align: center;">Thomas Edison</p>

Year 4 D&T - Broader Curriculum Aims and Objectives

Progression of Skills / Disciplinary Knowledge

Designing	Making	Technical Knowledge	Evaluating and Analysing	Cooking and Nutrition
<p>Understanding Contexts, Users and Purposes. Generating, developing, modelling and communicating ideas</p>	<p>Planning, Practical Skills and Techniques</p>	<p>Construction, Electrical systems and Textiles.</p>	<p>Own Ideas and Products Existing Products</p>	<p>Understand and apply the principles of nutrition and learn how to cook.</p>
<ul style="list-style-type: none"> • Use research for design ideas. • Show how a design meets a range of requirements and is fit for purpose. • Begin to create own design criteria. • Have at least one idea about how to create a product and suggest improvements to design. • Produce a plan and explain it to others. • Discuss how realistic a plan is. • Include an annotated sketch. • Make and explain design decisions considering the availability of resources. • Explain how a product will work. • Make a prototype. 	<ul style="list-style-type: none"> • Select suitable tools and equipment; explain choices in relation to required techniques and use accurately. • Select appropriate materials which are fit for purpose and explain choices. • Work through a plan in order. • Realise if a product is going to be good quality. • Measure, mark out, cut and shape materials/ components with some accuracy. • Assemble, join and combine materials and components with some accuracy. 	<ul style="list-style-type: none"> • Measure carefully to avoid mistakes. • Attempt to make a product strong. • Continue to work on a product even if the original did not work. • Select the most appropriate tools/techniques. • Explain alterations to a product after checking it. • Use a number of components in a circuit. • Think about the user when choosing textiles. • Begin to devise a template. • Explain how to join things in different ways. • Understand that a simple fabric shape can be used to make a 3D textiles project. 	<ul style="list-style-type: none"> • Refer to a design criteria while designing and making. • Use criteria to evaluate a product. • Begin to explain how an original design could be improved. • Evaluate existing products considering: how well they have been made, materials, whether they work, how they have been made, if they are fit for purpose. • Discuss by whom, when and where products were designed. • Research whether products can be recycled or reused. • Learn about some inventors/designers/ engineers/chefs/ manufacturers of ground-breaking products. 	<ul style="list-style-type: none"> • Explain how to be safe and hygienic and apply this when cooking. • Consider how to present products in interesting and attractive ways. • Understand that ingredients can be fresh, pre-cooked or processed. • Begin to understand about food being grown, reared or caught in the UK and wider world. • Describe an eat-well plate and what a healthy diet is made up of. • Use some of the following techniques: peeling, chopping, slicing, grating, mixing, spreading and baking.



PRIOR LEARNING LINKS

Y3 Seasonal Tarts: Learn more about where foods come from in the UK and the wider world. Understand which foods are available within which season. Adapt and follow a recipe to make a seasonal tart.

Y3 Monuments: Creating 3D structures using nets.

FUTURE LEARNING LINKS

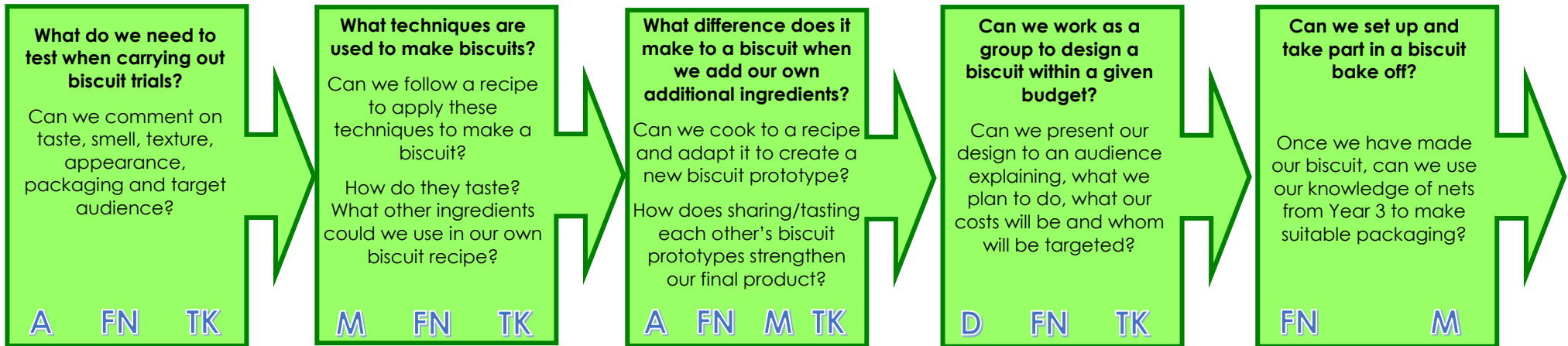
Y5 Healthier Bolognese: Learn about the different ingredients within dishes and where they come from. Understand which foods we can eat in an abundance and which are not as healthy. Design and make their own healthier Bolognese including design label.

Year 4 Design & Technology

Unit of Learning: Let's Make Alternative Biscuits

D&T School Theme: Food and Nutrition

Teaching Sequence for this Unit.



Focus for Disciplinary Knowledge

Designing	Making	Technical Knowledge	Evaluating and Analysing	Food and Nutrition
Understanding Contexts, Users and Purposes. Generating, developing, modelling and communicating ideas	Planning, Practical Skills and Techniques	Construction, Textiles, Mechanical Systems and Electrical Systems	Own Ideas and Products Existing Products	Understand and apply the principles of nutrition and learn how to cook.



PRIOR LEARNING LINKS

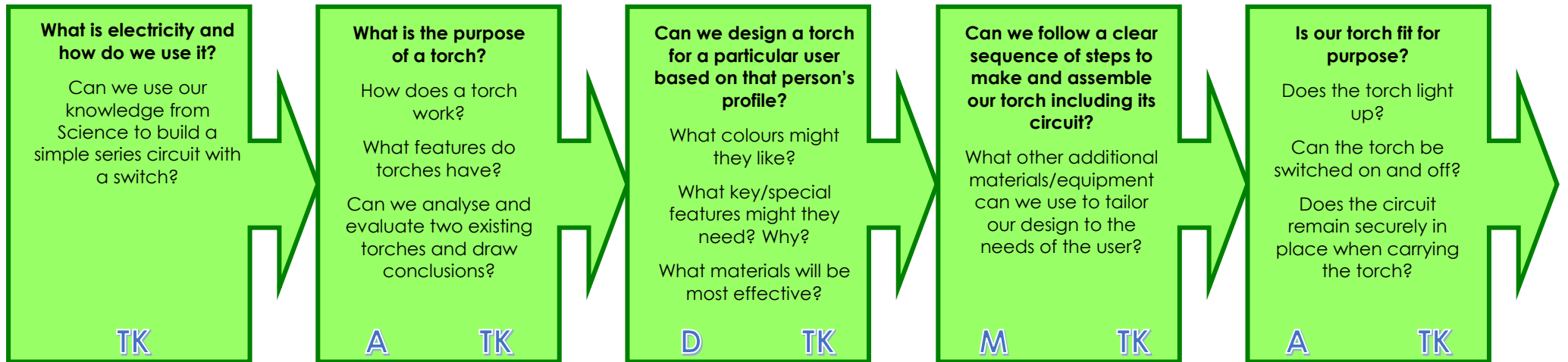
Y3: Moving Monsters– Developed further understanding of how moving parts work to create a mechanism. Looked at linkage system and the components within it. Learnt more about product design criteria and selected the most materials and equipment.

FUTURE LEARNING LINKS

Y5 Electronic Greetings Cards - design and create an electronic greetings by including a circuit to light up a bulb.

Year 4 Design & Technology
Unit of Learning: Let's Make a Torch
D&T School Theme: Electrical Systems

Teaching Sequence for this Unit.



Focus for Disciplinary Knowledge

Designing	Making	Technical Knowledge	Evaluating and Analysing	Food and Nutrition
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PRIOR LEARNING LINKS

Y2 Fabric Pouch: Learn how to sew running stitches and how to thread a needle and cut and tie thread. Use materials and decorative features. Join two identical fabric shapes.

FUTURE LEARNING LINKS

Y6 Stuffed Toys. Use a range of stitches to add decorations and objects to a felt main body. Stuff the main body and use strong and secure blanket stitching to ensure it remains intact.

Step 3: Art Lessons: Computer-aided design

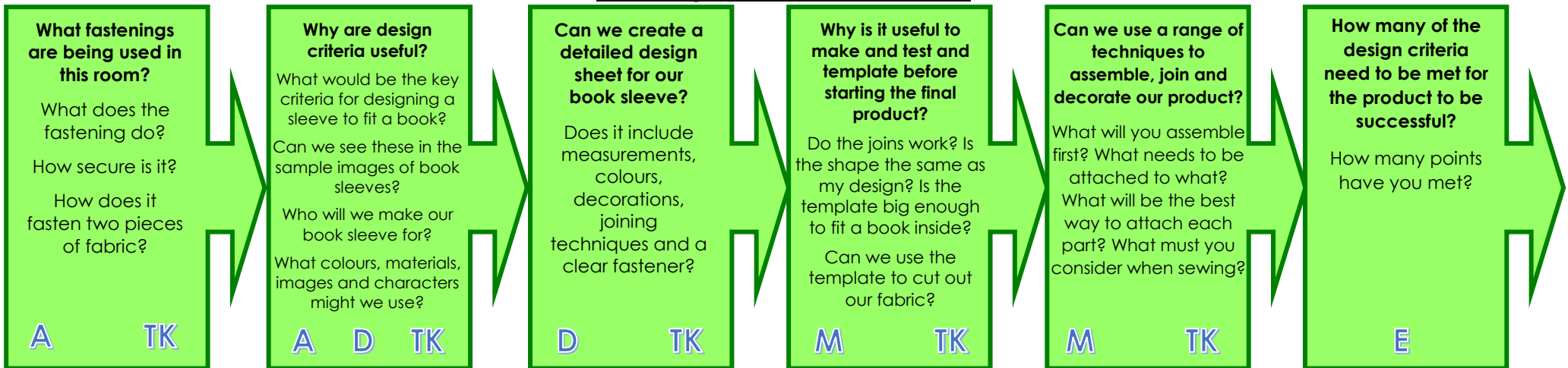
How can we use graphics and images to improve digital artwork?
How can we use technology to design our book sleeve?

Year 4 Design & Technology

Unit of Learning: Book Sleeve

D&T School Theme: Textiles - Evaluating Fastenings

Teaching Sequence for this Unit.



Focus for Disciplinary Knowledge

Designing	Making	Technical Knowledge	Evaluating and Analysing	Food and Nutrition
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