Whole School Curriculum Map by Subject: D+T

Key Stage 1	Key Stage 2
Design • purposeful, functional, appealing products for themselves and other users based on design criteria • generate, develop, model and communicate their ideas through talking, drawing, templates, mock-ups and, where appropriate, information and communication technology **Make** • select from and use a range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing] select from and use a wide range of materials and components, including construction materials, textiles and ingredients, according to their characteristics **Evaluate** • explore and evaluate a range of existing products evaluate their ideas and products against design criteria **Technical knowledge** • build structures, exploring how they can be made stronger, stiffer and more stable • explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products.	**Design** • use research and develop design criteria to inform the design of innovative, functional, appealing products that are fit for purpose, aimed at particular individuals or groups generate, develop, model and communicate their ideas through discussion, annotated sketches, cross-sectional and exploded diagrams, prototypes, pattern pieces and computer-aided design **Make** • select from and use a wider range of tools and equipment to perform practical tasks [for example, cutting, shaping, joining and finishing], accurately • select from and use a wider range of materials and components, including construction materials, textiles and ingredients, according to their functional properties and aesthetic qualities **Evaluate** • investigate and analyse a range of existing products • evaluate their ideas and products against their own design criteria and consider the views of others to improve their work • understand how key events and individuals in design and technology have helped shape the world **Technical knowledge** • apply their understanding of how to strengthen, stiffen and reinforce more complex structures • understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] • understand and use electrical systems in their products [for example, series circuits incorporating switches, bulbs, buzzers and motors] • apply their understanding of computing to program, monitor and control their products.

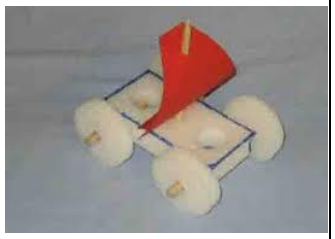
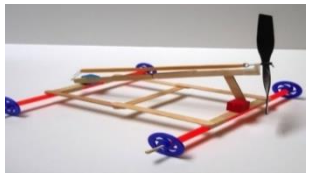
Whole School Curriculum Map by Subject: D+T

By the end of Year 2…	By the end of Year 4…	By the end of Year 6…
Design prior make Explore objects and designs to identify likes and dislikes of the designs. Explore how products have been created. **Draw, label** and **list** resources for a design of products that have a clear purpose and an intended user. **Evaluate** Suggest improvements to existing designs.	**Design prior make** Apply prior knowledge to electronics. Disassemble products to understand how they work **Draw, label** and **list** resources for a design of products that have a clear purpose and an intended user. Identify techniques to be used in construction. **Evaluate** Explain how you would improve upon existing designs, giving reasons for choices. understand how key events and individuals in design and technology have helped shape the world	**Design prior make** Apply prior knowledge to electronics. Disassemble products to understand how they work Combine elements of design from a range of inspirational designers throughout history, giving reasons for choices. **Where appropriate design electronically and draw, label** and list resources for a design of products that have a clear purpose and an intended user. Identify techniques to be used in construction. **Evaluate** Explain how you would improve upon existing designs, giving reasons for choices. Ensure products have a high quality finish, using art skills where appropriate. understand how key events and individuals in design and technology have helped shape the world

Whole School Curriculum Map by Subject: D+T

	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Cooking	• Cut peel and grate ingredients, safely and hygienically. • Measure using non - standard units. EG Fruit kebab Sandwich ingredients	• Cut peel and grate ingredients, safely and hygienically. • Measure or weigh using cups or balance. • Assemble ingredients and use hob to melt them. EG: Rocky road, flapjack	• Prepare ingredients, hygienically, ***selecting*** appropriate utensils, with support. • Measure ingredients to the nearest gram accurately, using non-digital and digital scales. • Follow a recipe with support. • Assemble and cook ingredients, with support • Controlling the temperature of the oven or hob. EG: Cake / biscuit	• Prepare ingredients, hygienically, ***selecting*** appropriate utensils, **independently.** • Independently, measure ingredients to the nearest gram accurately, using non-digital and digital scales. • Create their own recipe based on prior knowledge of how to combine ingredients. • Independent assemble and cook ingredients, • Controlling the temperature of the oven or hob. EG: Healthy, survival bar	• Introduction to the importance of correct **storage** and correct ingredients, using knowledge of micro-organism. For example: preserves, pickling, bottling, freezing. • Measure accurately, with support, and calculate ratios of ingredients to scale up or down form recipe. • Use 'rubbing in' techniques (pastry and crumble) and build on prior knowledge of cooking techniques. • Create and refine recipes including ingredients, methods, cooking times and temperatures. EG: Make jam and jam tarts, fruit compote and crumble.	• Select correct **storage** and correct ingredients, using knowledge of micro-organisms. For example: preserves, pickling, bottling and freezing. • Measure accurately; calculate ratios of ingredients to scale up or down from recipe. • Build on prior knowledge of cooking techniques. • Create and refine recipes including ingredients, methods, cooking times and temperatures. • Create and refine recipes including ingredients, methods, cooking times and temperatures. EG: Chutney, pickled vegetable,

Whole School Curriculum Map by Subject: D+T

		Technical knowledge (Mechanics) • explore and use mechanisms [for example, levers, sliders, wheels and axles], in their products. For example Make a land yacht 	**Technical knowledge (Mechanics)** • understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] For example investigate propeller cars 	**Technical knowledge (Mechanics)** • understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] **Electrics** **(Linked to science curriculum)** • Make a circuit using battery, bulb and switch. Diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage).	**Technical knowledge (Mechanics)** • understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages]	**Technical knowledge (Mechanics)** • understand and use mechanical systems in their products [for example, gears, pulleys, cams, levers and linkages] **Electrics** **(Linked to science / computing curriculum)** • Create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips). • apply their understanding of **computing** to program, monitor and control their products.

Whole School Curriculum Map by Subject: D+T

Materials and construction incorporating mechanics and electronics	**Exploring and developing skills and techniques** • Cut materials safely using scissors . • Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling). • Demonstrate a range of joining techniques. • Use wood to practise drilling, and nailing. **Technical knowledge** • build structures, exploring how they can be made stronger, stiffer and more stable	• Cut materials safely using scissors and other tools provided . • Measure and mark out to the nearest centimetre. • Demonstrate a range of cutting and shaping techniques (such as tearing, cutting, folding and curling). • Demonstrate a range of joining techniques (such as gluing, hinges or combining materials to strengthen.) • Use wood to practise cutting and screwing. **Technical knowledge** • build structures, exploring how they can be made stronger, stiffer and more stable	• Cut materials accurately and safely by selecting appropriate tools. • Measure and mark out to the nearest millimetre. • Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as cut outs). • Select appropriate joining techniques such as sanding wood after cutting based on prior knowledge. • Discuss up-cycling and repairing items. • Strengthen materials using suitable techniques. **Technical knowledge** • apply their understanding of how to strengthen, stiffen and reinforce more complex structures	• Cut materials accurately and safely by selecting appropriate tools. • Measure and mark out to the nearest millimetre. • Apply appropriate cutting and shaping techniques that include cuts within the perimeter of the material (such as slots). • Select appropriate joining techniques based on prior knowledge. • Discuss up-cycling and repairing items. • Strengthen materials using suitable techniques. **Technical knowledge** • apply their understanding of how to strengthen, stiffen and reinforce more complex structures	• Cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape). • Show an understanding of the qualities of materials to choose appropriate tools to cut and shape • Develop a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing, filling and sanding) **Technical knowledge** • apply their understanding of how to strengthen, stiffen and reinforce more complex structures	• Cut materials with precision and refine the finish with appropriate tools (such as sanding wood after cutting or a more precise scissor cut after roughly cutting out a shape). • Show an understanding of the qualities of materials to choose appropriate tools to cut and shape • **Independently develop** a product that uses a range of practical skills to create products (such as cutting, drilling and screwing, nailing, gluing, filling and sanding) **Technical knowledge** • apply their understanding of how to strengthen, stiffen and reinforce more complex structures

Whole School Curriculum Map by Subject: D+T

Textiles	• Join textiles using running stitch. • Colour and decorate textiles using a number of techniques (such as dyeing, adding sequins or printing). • e.g coaster	• Join textiles using a variety of stitches • Add embellishments, buttons and beads EG wild flower applique.	• With support make a template. Understand the need for a seam allowance, within the template. • Join textiles with appropriate stitching. Building prior knowledge, eg blanket or back stitch • Select the most appropriate techniques to decorate textiles. • e.g hand puppet		• Create objects (such as a cushion, bag, pencil case) that employ a seam allowance. • Join textiles, using recycled clothing or material with a combination of stitching techniques (such as back stitch for seams and running stitch to attach decoration). • Use the qualities of materials to create suitable visual and tactile effects in the decoration of textiles (such as a soft decoration for comfort on a cushion).	
Electricals				**(Linked to science curriculum)** • Make a circuit using battery, bulb and switch. Diagnose faults in battery operated devices (such as low battery, water damage or battery terminal damage). e.g topic related electric game		• Create circuits using electronics kits that employ a number of components (such as LEDs, resistors, transistors and chips). • apply their understanding of **computing** to program, monitor and control their products.