DESIGN & TECHNOLOGY THEMES					
Themes	Shape	Colour	Aesthetic	Strength	Movement
Year A					
KS1	**Mechanisms:** Moving Pictures		**Mechanisms:** Moving Pictures **Textiles:** Weaving	**Textiles:**Weaving	**Mechanisms:** Moving Pictures
LKS2	**Textiles:** Costume Design **Structures:** Bridges	**Textiles:** Costume Design	**Textiles:** Costume Design **Structures:** Bridges	**Structures:** Bridges	
UKS2	**Electricity & Programming:** Steady Hand Game		**Electricity & Programming:** Steady Hand Game	**Electricity & Programming:** Steady Hand Game	
Year B					
KS1	**Structures:** Bridges		**Structures:** Bridges	**Structures:** Bridges	
LKS2	**Mechanisms:** Slingshot cars			**Mechanisms:** Slingshot cars	**Mechanisms:** Slingshot cars
UKS2	**Structures/Graphic Design:** Food Packaging **Textiles:** Costume Design	**Textiles:** Costume Design	**Structures/Graphic Design:** Food Packaging **Textiles:** Costume Design	**Structures/Graphic Design:**Food Packaging	

DESIGN & TECHNOLOGY TIER 3 VOCABULARY					
Year 1	Year 2	Year 3	Year 4	Year 5	Year 6
Mechanisms: Moving Pictures Mechanism, lever, test, movement, strength **Textiles: Weaving** fabric, weave, woven **Structures: Bridges** Functional products, design criteria, model and communication, mock ups, structure		**Mechanisms: Slingshot Cars** slingshot, chassis, friction, momentum, prototype, annotated sketches, functional, construction **Textiles: Costume Design** faux, samples, character, imagery, toile, mock up, **Structures: Bridges** Components, construction materials, functional, fit for purpose		**Electricity & Programming: Steady Hand Game** circuit, wire, insulation, diagram, construction, material **Textiles: costume Design** garment, calico, trimming, character specific vocab **Graphic Design: Food packaging** model and communication, Components, construction materials, typography	

DESIGN AND TECHNOLOGY PROGRESSION MAP + TIER 2 VOCABULARY		
Category of Knowledge	Key Stage	Content
Make	KS1	• **Identify** the key features of an existing product • Generate ideas through **comparing** existing products • Plan and **describe** an innovative product by using pictures, diagrams and words • **Explain** their ideas orally • Identify **appropriate** tools and materials and explain their choices • Identify **how** to and make their structure stronger, stiffer or more stable • Identify and **categorise** a range of fabrics by **properties** and **purpose** • Identify and **discuss** when patterns are used in textile design & what patterns they can see
	LKS2	• Plan and design using **accurate** diagrams and labels • To give fluent **explanations** of their choices of materials • **Sequence** the main stages of making their product • Experiment with a range of techniques to increase **stability** in a structure • Create realistic plans e.g. what tools, equipment, materials and components they will use and give reasons **why** • Create a final design for their product based on **initial ideas**, research and revisions, based on existing ideas • Create a detailed plan considering their **target audience**, design criteria and intended purpose
	UKS2	• **Identify** their target audience and use this to **generate** ideas • Carry out research to **inform** plans e.g. surveys, interviews, questionnaires and using internet resources • Consider **culture** and **society** in their designs • Consider the use of the product when selecting materials • Develop design **specifications** while working within **constraints** e.g. time, resources and costs • Apply a range of information, including a user's view into account, when designing • Produce a detailed step-by-step plan for their design method

		• **Justify** their plan to someone else and communicate their design ideas using annotated sketches, ICT and other methods • Suggest some alternative designs and compare the **benefits and drawbacks** to inform the design process and outcome • **Devise** a template or pattern for their product • Consider the audience when choosing textiles, tools, and design ideas and explain why using your prior knowledge • Design ideas through a range of steps (oracy, drawing, templates and mock-ups) and make up a prototype first
Design	KS1	• **Explain** what they are making • **Select** appropriate resources and tools • **Explain** which tools they are using and why • Use tools safely • **Arrange** pieces of the construction before building • Join materials and components together in different ways • **Measure** materials to use in a model or structure • Use joining, folding or rolling to make it stronger • **Make** a structure/model using different materials • **Use** a range of fabrics to weave a pattern • Separate and bond fabrics together • **Build** an image using fabrics • **Create** a product using textiles
	LKS2	• Select the most appropriate materials, tools and techniques to use and **explain** why • Measure, cut and **assemble** with increasing accuracy, explaining the process **verbally** • Use equipment and tools with **increased accuracy** and safety • **Manipulate** materials effectively (eg. Shaping and moulding) and accurately using a range of tools and equipment • Join materials effectively to build a product • Analyse a character • Create a moodboard that reflects the character through imagery and colour • Use drawing to create initial designs • Reflect on research and create designs. • Explain and justify use of colours and fabric • Make an annotated final design with suitable fabric samples

	UKS2	• Choose appropriate tools and materials to ensure that the final product will appeal to the audience • **Utilise** a range of tools and equipment with good accuracy and effectiveness, within **established** safety parameters • Identify and begin to explore specialist tools, techniques and processes • Begin to use a range of simple stitches • **Apply** a range of joining techniques (textiles) using different tools • Analyse a character • Create a moodboard that reflects the character through imagery and colour • Explain and justify use of colours, shapes and fabric. • Make an annotated final design with suitable fabric samples. • Draw a final design with style and media that represents the character.
Critique & Knowledge	KS1	• **Describe** how their product works • **Identify** successes and next steps • **Assess** how well their product works • **Explain** what they would change if they were going to make their product again
	LKS2	• **Reflect** on their ideas as they progress and alter the design to make improvements • **Assess** how well their product works in relation to the design criteria and the intended purpose • **Explain** how they could improve their design and how their improvement would affect the original outcome (orally or written)
	UKS2	• **Continuously** check that their design is effective and fit for purpose • Assess how well their product meets the design **criteria** and the intended purpose and suggest improvements • **Evaluate** appearance and function against the original design criteria • Test and evaluate their final product • Explain why it is fit for purpose (written or orally) • Explore if different resources could have improved their product, explaining what it would have improved • Research and explore what information they would need to make improvements • Identify and understand the impact the product has on individuals, society and the environment

Programming & Mechanics	KS1	• **Make** a product which moves • Cut materials using scissors • **Explain** how different parts move and why they have chosen moving parts • Join materials together as part of a moving product • **Describe** materials used and their properties using a range of vocabulary
	LKS2	• **Apply** their understanding of how to strengthen, stiffen and reinforce more complex structures • **Understand** and use mechanical systems in their products e.g. gears, pulleys, cams, levers and linkages • **Understand** and use electrical systems in their products e.g. series of circuits incorporating switches, bulbs, buzzers and motors • Make a product which uses **mechanical components**. • **Apply** their understanding of how to strengthen, stiffen and reinforce more complex structures • **Explain** how to use mechanical systems in their products, then apply that knowledge e.g. gears, pulleys, cams, levers and linkages • **Explain** and understand how to use electrical systems in their products, then apply what they know e.g. series of circuits incorporating switches, bulbs, buzzers and motors • Understand and use **electrical components** to create a simple circuit • Make a product which uses electrical components • Use different kinds of circuits in their product to improve it • Incorporate a switch into their product
	UKS2	• **Refine** their product after testing it • Apply their understanding of computing to program, monitor and control their products • Explore and understand mechanical systems have an input, process and output • Understand and explain why mechanical gears and pulleys control speed and movement • Refine their product after testing it and explain what they have improved and why
	KS1	• **Recognise** a range of basic ingredients • **Explain** that ingredients are available from different shops, markets, or grown at home • **Explain** that some ingredients need to be prepared before they can be eaten • Explain that some equipment has a special job and know what that special job is, e.g. colander, peeler • Use a range of simple equipment • Use basic cooking skills to make dishes

Cooking and Nutrition		• **Identify** that different foods need to be stored differently • **Explain** the hygiene and **safety** rules, which need to be followed before, during and after cooking • **Understand** that food is a basic requirement of life • Understand that we need food to grow, be active and maintain health • **Talk** about foods they like and dislike with reasons
	LKS2	• **Know** that there is a vast range of ingredients used and grown around the world • **Understand** and apply the principles of a healthy and varied diet • Use the eat-well plate and consider the needs of different people when planning and cooking food • **Suggest** and **demonstrate** healthier ways to prepare and cook foods • **Research**, **plan** and prepare a range of savoury dishes • Use the eat-well plate and consider the needs of different people when planning and cooking food • Suggest and **demonstrate** healthier ways to prepare and cook foods • Read and interpret basic nutrition information on food packaging when making choices
	UKS2	• Write and follow recipes • Weigh and measure accurately • Select and use the most appropriate ingredients and equipment to plan and cook a range of dishes • Demonstrate an **extended** range of food skills and techniques • Explain how to use date marks and food storage instructions on food packaging • Demonstrate good food safety and hygiene when cooking • Understand that different types of food provide different amounts of energy • Explain the **components** of a healthy diet • Demonstrate an understanding of seasonality, and know where and how a variety of ingredients are grown, reared, caught and processed