King’s Court First School - Design and Technology Curriculum – KS2

KS 2 **Design & Technology**	**Term 1- All About Us / Our Community**	**Term 2 – Culture**	**Term 3 – The Arts**
Milestone 2	**To master practical skills**	**Food** • Prepare ingredients hygienically using appropriate utensils. • Measure ingredients to the nearest gram accurately (maths) • Follow a recipe. (English) • Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking) **Materials** • Cut materials accurately and safely by selecting appropriate tools. • Measure and mark out to the nearest millimetre. (maths) • Apply appropriate cutting and shaping techniques that include cut within the perimeter of the materials (such as slots or cut outs) • Select appropriate joining techniques. **Textiles** • Understand the need for a seam allowance • Join textiles with appropriate stitching • Select the most appropriate techniques to decorate textiles **Electrical and electronics** • Create series and parallel circuits **Construction** • Choose suitable techniques to construct products or to repair items. • Strengthen material using suitable techniques. **Mechanics** • Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears) **Computing** • Control and monitor models using software designed for this purpose.	
	To design, make. Evaluate and improve	• Design with purpose by identifying opportunity to design. • Make products by working efficiently (such as by carefully selecting materials). • Refine work and techniques as work progresses, continually evaluating the product design. • Use software to design and represent product design.	
	To take inspiration from design throughout history	• Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for design, • Improve upon existing designs, giving reason for choice, • Disassemble products to understand how they work.	
	Breadth of Study	**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 diagram, prototypes, pattern pieces and computer- aided design. **Make** Select from and use a wider range of tools and equipment to preform practical tasks, such as cutting, shaping, joining and finishing, accurately. Select form 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 other 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 strength, stiffen and reinforce more complex structures. Understand and use mechanical systems in their products, such as gears, pulleys, cams, levers and linages Understand and use electrical systems in their products, such as series circuits incorporating switchers, bulbs, buzzers and motors. Apply them understand of computing to programme, monitor and control their products. **Cooking nutrition** Understand and apply the principles of healthy and varied diet. Prepare and cook a variety of predominantly savoury dishes using a range of cooking techniques. Understand seasonality and know where and how a variety of ingredients are grown, reared, caught and processed.	

	1A Art	**1B- Ancient Egypt** **Materials**	2A Art	**2B- Romans** **Construction**	3A Art	**3B- Textiles** **Computing software**
Year 3		**As designers…** **To master practical skills, we will:** **Materials** • Cut materials accurately and safely by selecting appropriate tools. • Measure and mark out to the nearest millimetre. (maths) • Apply appropriate cutting and shaping techniques that include cut within the perimeter of the materials (such as slots or cut outs) • Select appropriate joining techniques. **To design, make. Evaluate and improve** • *Design with purpose by identifying opportunity to design.* • *Make products by working efficiently (such as by carefully selecting materials).* • *Refine work and techniques as work progresses, continually evaluating the product design.* • *Use software to design and represent product design.* **To take inspiration from design throughout history** • *Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for design,* • *Improve upon existing designs, giving reason for choice,* • *Disassemble products to understand how they work.*		**As designers…** **To master practical skills, we will:** **Construction** • Choose suitable techniques to construct products or to repair items. • Strengthen material using suitable techniques. **To design, make. Evaluate and improve** • *Design with purpose by identifying opportunity to design.* • *Make products by working efficiently (such as by carefully selecting materials).* • *Refine work and techniques as work progresses, continually evaluating the product design.* • *Use software to design and represent product design.* **To take inspiration from design throughout history** • *Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for design,* • *Improve upon existing designs, giving reason for choice,* • *Disassemble products to understand how they work.*		**As designers…** **To master practical skills, we will:** **Textiles** • Understand the need for a seam allowance • Join textiles with appropriate stitching • Select the most appropriate techniques to decorate textiles **Computing** Control and monitor models using software designed for this purpose. **To design, make. Evaluate and improve** • *Design with purpose by identifying opportunity to design.* • *Make products by working efficiently (such as by carefully selecting materials).* • *Refine work and techniques as work progresses, continually evaluating the product design.* • *Use software to design and represent product design.* **To take inspiration from design throughout history** • *Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for design,* • *Improve upon existing designs, giving reason for choice,* • *Disassemble products to understand how they work.*
Knowledge Webs	King’s Court Design Cycle – DT Word mat – Materials and Textiles Sewing Techniques		King’s Court Design Cycle – DT DT word mat Joining word mat		King’s Court Design Cycle – DT DT word mat - Textiles	
Continuous Provision	**Tinker tables –** Materials		**Tinker tables** - Products		**Tinker tables –** Join	
Breadth of Study	**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 diagram, prototypes, pattern pieces and computer- aided design. **Make** Select from and use a wider range of tools and equipment to preform practical tasks, such as cutting, shaping, joining and finishing, accurately.		**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 diagram, prototypes, pattern pieces and computer- aided design. **Make** Select from and use a wider range of tools and equipment to preform practical tasks, such as cutting, shaping, joining and finishing, accurately.		**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 diagram, prototypes, pattern pieces and computer- aided design. **Make** Select from and use a wider range of tools and equipment to preform practical tasks, such as cutting, shaping, joining and finishing, accurately.	

	Select form and use a wider range of materials and components, including		Select form and use a wider range of materials and components, including		Select form and use a wider range of materials and components, including	
	1A Art	**1B- Stone age** **Mechanics – pulleys and gears**	2A Art	**1B- Saxons** **Food**	3A Art	1B- **Electrical Circuit** **Electrics**
Year 4	shape the world. **Technical Knowledge** Apply their understanding of how to strength, stiffen and reinforce more complex structures.	**As designers…** **To master practical skills, we will:**	shape the world.	**As designers…** **To master practical skills, we will:**	shape the world. **Technical Knowledge** Understand and use mechanical systems in their products, such as gears, pulleys, cams, levers and linages	**As designers…** **To master practical skills, we will:**
		Mechanics - Use scientific knowledge of the transference of forces to choose appropriate mechanisms for a product (such as levers, winding mechanisms, pulleys and gears) **To design, make. Evaluate and improve** - *Design with purpose by identifying opportunity to design.* - *Make products by working efficiently (such as by carefully selecting materials).* - *Refine work and techniques as work progresses, continually evaluating the product design.* - *Use software to design and represent product design.* **To take inspiration from design throughout history** - *Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for design,* - *Improve upon existing designs, giving reason for choice,* - *Disassemble products to understand how they work.*		**Food** - Prepare ingredients hygienically using appropriate utensils. - Measure ingredients to the nearest gram accurately (maths) - Follow a recipe. (English) - Assemble or cook ingredients (controlling the temperature of the oven or hob, if cooking) **To design, make. Evaluate and improve** - *Design with purpose by identifying opportunity to design.* - *Make products by working efficiently (such as by carefully selecting materials).* - *Refine work and techniques as work progresses, continually evaluating the product design.* - *Use software to design and represent product design.* **To take inspiration from design throughout history** - *Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for design,* - *Improve upon existing designs, giving reason for choice,* - *Disassemble products to understand how they work.*		**Electrical and electronics** - Create series and parallel circuits **To design, make. Evaluate and improve** - *Design with purpose by identifying opportunity to design.* - *Make products by working efficiently (such as by carefully selecting materials).* - *Refine work and techniques as work progresses, continually evaluating the product design.* - *Use software to design and represent product design.* **To take inspiration from design throughout history** - *Identify some of the great designers in all of the areas of study (including pioneers in horticultural techniques) to generate ideas for design,* - *Improve upon existing designs, giving reason for choice,* - *Disassemble products to understand how they work.*
Knowledge Webs	King's Court Design Cycle - DT		King's Court Design Cycle – DT DT Mat – Food		King's Court Design Cycle – DT DT Mat – Electrical	
Continuous Provision	**Tinker tables –** Product		**Tinker tables –** Food		**Tinker tables –** Circuits	
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Deliberate choices:	Style matches drivers Each Key Stage repeats criteria so skills are applied Designers and techniques matched Reference to British designs					