

### INTENT:



**“Enjoy failure and learn from it. You never learn from success.”**

**James Dyson**

Design and Technology is all around us in our modern world. Learning about D&T helps our students understand the world in which they are living, and actively engage in it. It helps them know where we have been and develop where we are going.

The D&T curriculum at The Kings consists of a range of creative, imaginative and innovative experiences of designing and practical based activities. Using a range of materials from four main areas graphics, engineering, textiles and food in conjunction with drawing on additional knowledge from other STEAM subjects and links to other curriculum area such as science, art and maths.

The curriculum is designed to give all students the opportunity to learn the skills and knowledge to engage positively with materials, components, products, and technologies in the world around them. Through these types of activities students are actively contributing to the creativity, culture, wealth and well-being of themselves and their community.





**\*\*Please click on the icons to access our online portal where you can learn more about each topic\*\***

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Half term points							
AUTUMN 1		AUTUMN 2		SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
<b>Core:</b> How is research and exploration, such as the study of different cultures, used to identify and understand user needs?		<b>Core:</b> How can you identify and solve design problems and understand how to reformulate problems?		<b>Core:</b> How do I develop specifications to inform the design of innovative, functional, appealing products that respond to needs in a variety of situations?	<b>Core:</b> How do I develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools?	<b>Core:</b> How can I analyse the work of past and present professionals and others to develop and broaden their understanding of DT?	<b>Core:</b> What are the new and emerging technologies?
<b>DT:</b> <b>Blockbot project</b> <ul style="list-style-type: none"><li>• Categories of timbers</li><li>• Analysing existing products using ACCESSFM</li><li>• Design ideas 2D and oblique</li><li>• Accuracy and tolerance</li><li>• Method makings</li><li>• Manufacturing diary</li><li>• Testing and evaluating.</li></ul>					<b>DT:</b> <b>Blockbot project</b> <ul style="list-style-type: none"><li>• Categories of timbers</li><li>• Analysing existing products using ACCESSFM</li><li>• Design ideas 2D and oblique</li><li>• Accuracy and tolerance</li><li>• Method makings</li><li>• Manufacturing diary</li><li>• Testing and evaluating.</li></ul>		
<b>Food:</b> <b>Understand the importance of nutrition when planning menus</b> <ul style="list-style-type: none"><li>• Describe functions of nutrients in the human body.</li><li>• Compare nutritional needs of specific groups</li><li>• Explain characteristics of unsatisfactory nutritional intake</li><li>• Explain how cooking methods impact on nutritional value</li><li>• The students will complete 5 practical activities which they will manufacture a range of savoury dishes.</li><li>• will manufacture a range of savoury dishes.</li></ul>					<b>Food:</b> <b>Understand the importance of nutrition when planning menus</b> <ul style="list-style-type: none"><li>• Describe functions of nutrients in the human body.</li><li>• Compare nutritional needs of specific groups</li><li>• Explain characteristics of unsatisfactory nutritional intake</li><li>• Explain how cooking methods impact on nutritional value</li><li>• The students will complete 5 practical activities which they will manufacture a range of savoury dishes.</li><li>• will manufacture a range of savoury dishes.</li></ul>		



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8	Half term points						
	AUTUMN 1		AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
	<b>Core:</b> Identify and solve their own design problems and understand how to reformulate problems given to them		<b>Core:</b> Develop and communicate design ideas using annotated sketches, detailed plans, 3-D and mathematical modelling, oral and digital presentations and computer-based tools	<b>Core:</b> Analyse the work of past and present professionals and others to develop and broaden their understanding	<b>Core:</b> Understand how more advanced mechanical systems used in their products enable changes in movement and force	<b>Core:</b> Apply computing and use electronics to embed intelligence in products that respond to inputs [for example, sensors], and control outputs [for example, actuators], using programmable components [for example, microcontrollers].	
	<b>DT:</b> <b>Passive speaker project</b> <ul style="list-style-type: none"><li>• How a passive speaker works – sound waves</li><li>• Categories of timber</li><li>• Analysing existing products using ACCESSFM</li><li>• Design ideas in oblique, isometric</li><li>• Quality assurance and control, tolerance and accuracy</li><li>• Following a method of making</li><li>• Testing and evaluating.</li></ul>				<b>DT:</b> <b>Passive speaker project</b> <ul style="list-style-type: none"><li>• How a passive speaker works – sound waves</li><li>• Categories of timber</li><li>• Analysing existing products using ACCESSFM</li><li>• Design ideas in oblique, isometric</li><li>• Quality assurance and control, tolerance and accuracy</li><li>• Following a method of making</li><li>• Testing and evaluating.</li></ul>		
	<b>Food:</b> <b>Understand menu planning.</b> <ul style="list-style-type: none"><li>• explain factors to consider when proposing dishes for menus</li><li>• explain how dishes on a menu address environmental issues</li><li>• explain how menu dishes meet customer needs</li><li>• plan production of dishes for a menu</li><li>• The students will complete 5 practical activities which they will manufacture a range of savoury dishes.</li><li>• 5 practical activities which they will manufacture a range of savoury dishes.</li></ul>				<b>Food:</b> <b>Understand menu planning.</b> <ul style="list-style-type: none"><li>• explain factors to consider when proposing dishes for menus</li><li>• explain how dishes on a menu address environmental issues</li><li>• explain how menu dishes meet customer needs</li><li>• plan production of dishes for a menu</li><li>• The students will complete 5 practical activities which they will manufacture a range of savoury dishes.</li></ul>		



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Half term points						
AUTUMN 1		AUTUMN 2	SPRING 1	SPRING 2	SUMMER 1	SUMMER 2
<b>Core:</b> Identify and solve their own design problems and understand how to reformulate problems given to them		<b>Core:</b>	<b>Core:</b> Analyse the work of past and present professionals and others to develop and broaden their understanding	<b>Core:</b> Understand how more advanced mechanical systems used in their products enable changes in movement and force	<b>Core:</b> Apply computing and use electronics to embed intelligence in products that respond to inputs [for example, sensors], and control outputs [for example, actuators], using programmable components [for example, microcontrollers].	
<b>DT:</b> <b>Clock project:</b> <ul style="list-style-type: none"><li>Joining methods and manufacturing processes.</li><li>Categories of timber/manufactured board.</li><li>Analysing existing products using ACCESSFM</li><li>Design ideas in oblique, isometric</li><li>Iterative design</li><li>Quality assurance and control, tolerance and accuracy</li><li>Following a method of making</li><li>Testing and evaluating.</li></ul>				<b>DT</b> <b>Clock project:</b> <ul style="list-style-type: none"><li>Joining methods and manufacturing processes.</li><li>Categories of timber/manufactured board.</li><li>Analysing existing products using ACCESSFM</li><li>Design ideas in oblique, isometric</li><li>Iterative design</li><li>Quality assurance and control, tolerance and accuracy</li><li>Following a method of making</li><li>Testing and evaluating</li></ul>		
<b>Food:</b> Understand the environment in which hospitality and catering providers operate <ul style="list-style-type: none"><li>describe the structure of the hospitality and catering industry</li><li>analyse job requirements within the hospitality and catering industry</li><li>describe working conditions of different job roles across the hospitality and catering industry</li><li>explain factors affecting the success of hospitality and catering providers</li><li>The students will complete 5 practical activities which they will manufacture a range of savoury dishes.</li></ul>				<b>Food:</b> Understand the environment in which hospitality and catering providers operate <ul style="list-style-type: none"><li>describe the structure of the hospitality and catering industry</li><li>analyse job requirements within the hospitality and catering industry</li><li>describe working conditions of different job roles across the hospitality and catering industry</li><li>explain factors affecting the success of hospitality and catering providers</li><li>The students will complete 5 practical activities which they will manufacture a range of savoury dishes.</li></ul>		