

KS2 Medium Term Plan for DT

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Autumn	LKS2	Seasonal Stockings (RE) - To explore and analyse existing products - To explore different ways to join fabric using sewing skills - To explore different ways to decorate fabric using sewing skills - To design a Christmas stocking - To use sewing skills to make a Christmas stocking - To evaluate a finished product DESIGN: Record ideas using annotated diagrams. - Use models, kits and drawings to help formulate design ideas. - Sketch and model alternative ideas. - Decide which design idea to develop. MAKE: - Develop one idea in depth. - Select from and use a wide range of tools. - Cut accurately and safely to a marked line. - Select from and use a wide range of materials.	Awesome Egyptians (History) - To use their knowledge of Ancient Egyptian tombs to aid their construction of a model tomb. - To begin the process of designing making an Egyptian Tomb - Create a 3D shape from several pieces of 2D card. - Understand how the perspective of the tomb is created in the model. - To understand strengthen, stiffen and reinforce the complex structure of your tomb. - To construct a 3D model staircase from 2D pieces of card and add finishing touches to your model tomb. - To be able to evaluate a finished product. DESIGN: - Plan the sequence of work. - Devise step by step plans which can be read / followed by someone else.	Let's Go Fly a Kite (science) - To research kites designers and how kites have helped shape the world. - To find out about how Homan Walsh used a kite to help build Niagara Falls Bridge. - To research and investigate different parts of a kite and their function. - To research and investigate different kite shapes. - To develop design criteria for a kite. - To sketch a design for a kite. - To select tools and materials to make a kite. - To strengthen a frame structure to support a kite. - To test and evaluate their own kite.

		TECHNICAL KNOWLEDGE: • Use the correct vocabulary appropriate to the project. • Join materials using appropriate methods. • Create 3D textile products using pattern pieces. • Understand pattern layout with textiles. EVALUATE: • Research and evaluate existing products. • Consider user and purpose. • Consider and explain how the finished product could be improved related to design criteria. • Investigate key events and individuals in design and technology.	• Use exploded diagrams and cross-sectional diagrams to communicate ideas. MAKE: • Make prototypes. • Use researched information to inform decisions. • Produce detailed lists of ingredients / components / materials and tools. • Refine their product – review and rework / improve. TECHNICAL KNOWLEDGE: • Use the correct vocabulary appropriate to the project. • Join materials using appropriate methods. • Stiffen and reinforce complex structures. EVALUATE: • Identify the strengths and weaknesses of their design ideas. • Report using correct technical vocabulary. • Discuss how well the finished product meets the design criteria having tested on/discussed outcomes with the user. • Understand how key people have influenced design in a variety of contexts. • Investigate key events and individuals in design and technology.	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. • Develop a design criteria for a kite. • Generate, develop, model and communicate their ideas through annotated sketches. • Explain and communicate design ideas. MAKE: • Select from and use a wider range of tools and equipment to perform practical tasks (for example, cutting, shaping, joining and finishing), accurately. • Follow a design sketch and notes. • Measure and cut the body of the kite. • Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. • Strengthen a frame structure to support the kite. EVALUATE: • Evaluate their ideas and products against their own design criteria and consider the views of others to improve their work.
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				• Test the kite and then use their own design criteria to evaluate. TECHNICAL KNOWLEDGE: • Use the correct vocabulary appropriate to the project. • Join materials using appropriate methods. • Stiffen and reinforce complex structures.
	UKS2	Electronic Greeting Card (Science) • To make a functional graphite circuit • To design an electronic greeting card • To follow a design brief to make a greeting card • To make a circuit and integrate it into the greeting card • To analyse and evaluate product according to design criteria DESIGN: • Record ideas using annotated diagrams. • Use models, kits & drawings to help formulate design ideas. • Sketch and model alternative ideas. • Decide which design idea to develop. MAKE: • Develop one idea in depth. • Select from and use a wide range of tools. • Cut accurately and safely to a marked line.	Pop-up Book (English) • To know that an input is the motion used to start a mechanism • To know that an output is the motion that happens as a result of starting the input • To know that structures use the movement of the pages to work • To know that mechanisms control movement • To design a book made up of a front cover and four pages and include a mixture of structures and mechanisms within it • To follow a design brief to make a pop- up book • To make mechanisms and/or structures as detailed in my design template by using sliders, pivots and folds to produce movement	

		• Select from and use a wide range of materials. TECHNICAL KNOWLEDGE: • Use the correct vocabulary appropriate to the project. • Join materials using appropriate methods. • Stiffen and reinforce complex structures. • Use electrical systems such as motors and switches. • Program, monitor and control using ICT. EVALUATE: • Research and evaluate existing products. • Consider user and purpose. • Consider and explain how the finished product could be improved related to design criteria. • Investigate key events and individuals in design and technology.	• To use layers and spacers to cover the working of mechanisms • To create a high-quality product suitable for a target user • To analyse and evaluate product according to design criteria DESIGN: • Plan the sequence of work. • Devise step by step plans which can be read / followed by someone else. • Use exploded diagrams and cross-sectional diagrams to communicate ideas. MAKE: • Make prototypes. • Use researched information to inform decisions. • Produce detailed lists of ingredients / components / materials and tools. • Refine their product – review and rework / improve. TECHNICAL KNOWLEDGE: • Use the correct vocabulary appropriate to the project. • Join materials using appropriate methods. • Build frameworks to support mechanisms. EVALUATE:	
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			- Identify the strengths and weaknesses of their design ideas. - Report using correct technical vocabulary. - Discuss how well the finished product meets the design criteria having tested on/discussed outcomes with the user. - Understand how key people have influenced design in a variety of contexts. - Investigate key events and individuals in design and technology.	
Spring	LKS2	Round House (History) - To research and develop a design for a Bronze/Iron age roundhouse - To select from and use a wider range of tools and equipment to make a model of the roundhouses. - Select from and use a wider range of materials and components. - Understand about the use of 'wattling'. - To be able to evaluate a finished product. DESIGN: Record ideas using annotated diagrams. - Use models, kits and drawings to help formulate design ideas. - Sketch and model alternative ideas. - Decide which design idea to develop. MAKE: - Develop one idea in depth. - Select from and use a wide range of tools.	Sandwich Snacks - To learn that food can be divided into different groups and that sandwiches can form part of a healthy diet. - To taste a variety of different breads and sandwiches and examine flavours and textures. - To design and plan a sandwich for a particular purpose. - To be able to create a healthy sandwich. - To be able to evaluate a finished product. DESIGN: - Plan the sequence of work. - Devise step by step plans which can be read / followed by someone else.	

		• Cut accurately and safely to a marked line. • Select from and use a wide range of materials. TECHNICAL KNOWLEDGE: • Use the correct vocabulary appropriate to the project. • Cut strip wood, dowel, square section wood accurately to 1mm. • Stiffen and reinforce complex structures. EVALUATE: • Research and evaluate existing products. • Consider user and purpose. • Consider and explain how the finished product could be improved related to design criteria. • Investigate key events and individuals in design and technology.	• Use exploded diagrams and cross-sectional diagrams to communicate ideas. MAKE: • Make prototypes. • Use researched information to inform decisions. • Produce detailed lists of ingredients / components / materials and tools. • Refine their product – review and rework / improve. TECHNICAL KNOWLEDGE: • Use the correct vocabulary appropriate to the project. EVALUATE: • Identify the strengths and weaknesses of their design ideas. • Report using correct technical vocabulary. • Discuss how well the finished product meets the design criteria having tested on/discussed outcomes with the user. • Understand how key people have influenced design in a variety of contexts. • Investigate key events and individuals in design and technology. COOKING & NUTRITION: • Understand and apply the principles of a healthy and varied diet.	
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			- Choose ingredients to support healthy eating choices when designing their food products. - Prepare and cook a variety of mostly savoury dishes using a range of cooking techniques.	
	UKS2	Chariots (History) - To understand that chariot racing was a form of entertainment for the Romans. - Have an image of a Roman chariot and can imagine what a race would have been like - To join wheels and axles effectively, choosing appropriate materials, and explain how they work. - To generate a design for a Roman chariot based on research, prior knowledge and the design brief. - Select from a range of materials based on their functional properties. - Generate and develop their design ideas through annotated sketches and discussions. - Use prior knowledge and research to inform the design of a chariot that is fit for purpose. - Select from a range of materials based on their functional properties. - Use a range of tools to make a Roman chariot.	Building Bridges (Geography) - To explore ways in which pillars and beams are used to span gaps. - To explore ways in which trusses can be used to strengthen bridges. - To explore ways in which arches are used to strengthen bridges. - To understand how suspension bridges are able to span long distances. - To develop criteria and design a prototype bridge for a purpose. - To analyse and evaluate products according to design criteria. DESIGN: - Plan the sequence of work. - Devise step by step plans which can be read / followed by someone else. - Use exploded diagrams and cross-sectional diagrams to communicate ideas. MAKE: - Make prototypes.	

		• Make a Roman chariot according to the design brief. • Evaluate their chariot based on the design brief. DESIGN: • Record ideas using annotated diagrams. • Use models, kits and drawings to help formulate design ideas. • Sketch and model alternative ideas. • Decide which design idea to develop. MAKE: • Develop one idea in depth. • Select from and use a wide range of tools. • Cut accurately and safely to a marked line. • Select from and use a wide range of materials. TECHNICAL KNOWLEDGE: • Use the correct vocabulary appropriate to the project. • Join materials using appropriate methods. • Cut strip wood, dowel, square section wood accurately to 1mm. • Build frameworks to support mechanisms. • Stiffen and reinforce complex structures. • Use mechanical systems such as cams, pulleys and gears. EVALUATE: • Research and evaluate existing products. • Consider user and purpose. • Consider and explain how the finished product could be improved related to design criteria.	• Use researched information to inform decisions. • Produce detailed lists of ingredients / components / materials and tools. • Refine their product – review and rework / improve. TECHNICAL KNOWLEDGE: • Use the correct vocabulary appropriate to the project. • Join materials using appropriate methods. • Cut strip wood, dowel, square section wood accurately to 1mm. • Build frameworks to support mechanisms. • Stiffen and reinforce complex structures. EVALUATE: • Identify the strengths and weaknesses of their design ideas. • Report using correct technical vocabulary. • Discuss how well the finished product meets the design criteria having tested on/discussed outcomes with the user. • Understand how key people have influenced design in a variety of contexts. • Investigate key events and individuals in design and technology.	
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Summer	LKS2	Seasonal Food (Science) - To cook using British ingredients available all year round. - To know how seasonal fruits in Britain are grown and processed - To understand why vegetables form an important part of a healthy and varied diet. - To find out about how seasonally produced meat can form part of a healthy diet. - To know how fish are caught or reared, processed and used in healthy meals. - To show what you have learned about eating seasonal food as part of a healthy, varied diet. DESIGN: - Record ideas using annotated diagrams. - Use models, kits and drawings to help formulate design ideas. - Sketch and model alternative ideas. - Decide which design idea to develop. MAKE: - Develop one idea in depth.	Mini Greenhouses (Science – Plant Hunters) - To explore existing greenhouses - To investigate stable structures - To investigate materials for making a mini greenhouse - To design a mini greenhouse - To make a mini greenhouse - To evaluate a finished product DESIGN: - Plan the sequence of work. - Devise step by step plans which can be read / followed by someone else. - Use exploded diagrams and cross-sectional diagrams to communicate ideas. MAKE: - Make prototypes. - Use researched information to inform decisions. - Produce detailed lists of ingredients / components / materials and tools. - Refine their product – review and rework / improve. TECHNICAL KNOWLEDGE:	

		• Select from and use a wide range of tools. • Cut accurately and safely to a marked line. • Select from and use a wide range of materials. COOKING & NUTRITION: • Join and combine a widening range of ingredients. • Select and prepare foods for a particular purpose. • Know where and how ingredients are grown and processed. EVALUATE: • Research and evaluate existing products. • Consider user and purpose. • Consider and explain how the finished product could be improved related to design criteria. • Investigate key events and individuals in design and technology.	• Use the correct vocabulary appropriate to the project. • Join materials using appropriate methods. • Cut strip wood, dowel, square section wood accurately to 1mm. • Build frameworks to support mechanisms. • Stiffen and reinforce complex structures. EVALUATE: • Identify the strengths and weaknesses of their design ideas. • Report using correct technical vocabulary. • Discuss how well the finished product meets the design criteria having tested on/discussed outcomes with the user. • Understand how key people have influenced design in a variety of contexts. • Investigate key events and individuals in design and technology.	
	UKS2	Functions of Fabric (History) • To know about the properties and uses of a range of different fabrics • To investigate natural and synthetic fabrics and how their uses changed fashion • To understand the importance of recycling and reusing fabric	Farm to Fork (Science) • To understand where food comes from • To understand the term 'healthy' • To adapt a traditional recipe • To complete a food product.	

		• To explore and practise different sewing stitches • To design a small fabric bag using specific criteria • To make a small bag using specific criteria DESIGN: • Record ideas using annotated diagrams. • Use models, kits and drawings to help formulate design ideas. • Sketch and model alternative ideas. • Decide which design idea to develop. MAKE: • Develop one idea in depth. • Select from and use a wide range of tools. • Cut accurately and safely to a marked line. • Select from and use a wide range of materials. TECHNICAL KNOWLEDGE: • Use the correct vocabulary appropriate to the project. • Join materials using appropriate methods. • Create 3=D textile products using pattern pieces. • Understand pattern layout with textiles. EVALUATE: • Research and evaluate existing products. • Consider user and purpose. • Consider and explain how the finished product could be improved related to design criteria.	DESIGN: • Plan the sequence of work. • Devise step by step plans which can be read / followed by someone else. • Use exploded diagrams and cross-sectional diagrams to communicate ideas. MAKE: • Make prototypes. • Use researched information to inform decisions. • Produce detailed lists of ingredients / components / materials and tools. • Refine their product – review and rework / improve. TECHNICAL KNOWLEDGE: • Use the correct vocabulary appropriate to the project. EVALUATE: • Identify the strengths and weaknesses of their design ideas. • Report using correct technical vocabulary. • Discuss how well the finished product meets the design criteria having tested on/discussed outcomes with the user.	
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		Investigate key events and individuals in design and technology.	- Understand how key people have influenced design in a variety of contexts. - Investigate key events and individuals in design and technology. COOKING & NUTRITION: - Understand and apply the principles of a healthy and varied diet. - Choose ingredients to support healthy eating choices when designing their food products. - Prepare and cook a variety of mostly savoury dishes using a range of cooking techniques.	
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