Pudsey Bolton Royd Primary School Design & Technology Long-Term Plan

Year 3

Autumn 1	*Autumn 2*	*Spring 1*
Enquiry Questions		
	Can I create my own Bronze age shelter?	
Outcomes		
	Evaluate **prehistoric shelters.** Design a **bronze age shelter.** Make a functional **bronze age shelter.** Evaluate my product against my design.	
Linked Texts		
Linked Experiences		
Overview		
	Children will research **prehistoric shelters** from the bronze age. They will identify tools used to make the shelter and discuss the advantages and disadvantages. They will use this evaluation to create a drawn sketch of their own using modern day tools and materials. In making their product, children will choose appropriate materials from a given selection. They will use tools to cut and bond materials together. Once their product is complete, they will evaluate it against their design picking out any improvements that could be made to their own and to each other's products.	
Knowledge and/or Skills Covered		
	Verbally explain their plans for design, linking to techniques and using DT vocabulary. Refer to research while talking about their product. Draw sketches at different points of the design process. Start to draw to scale. Precision level: accurate 2D shapes. Politely discuss their peers' work Willingness to alter and/or restart designs. Measure to nearest mm and 45° for angle. Start to estimate length and distance. Start to understand area. Link their own and others' designs and products to their function and purpose. Start to verbalise others' opinions that differ from their own.	

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	Make choices about following advice.	
National Curriculum Attainment Targets		
	Use research and develop design criteria to inform the design of functional and that are fit for purpose. Generate, develop, model and communicate their ideas through discussion and annotated sketches. 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, according to their functional properties. 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.	
Important Vocabulary		
	Approximate, Accurate, Technique, Structure, Parallel, Perpendicular, Weave, Version, Purpose, Opinion, Mock-up.	

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Spring 2	*Summer 1*	*Summer 2*
Enquiry Questions		
	Can I create a functional bridge?	Can I use a "bridge" hold? Can I break eggs without breaking the yoke?
Outcomes		
	Evaluate current bridges and how they work Design a functional bridge Make a functional bridge Evaluate their product against their design	Design a healthy balanced meal Make a healthy balanced meal Evaluate my healthy balanced meal
Linked Texts		
Linked Experiences		
Overview		
	Children will have the opportunity to research one of the most famous bridge engineers, they will look at bridges he created focusing on the design and functionality of each bridge. This will lead into the children's own design of a functional bridge, they must consider such areas: length, weight, balance and type of bridge. They will sketch their design with encouragement of adding 3D effects through shading. They will also require detailed labelling of their design considering joins and cuts that may be used on different parts of the bridge/material. Children will be given the opportunity to practice joining skills during the make of their bridge. Once their product is complete, children will test its functionality adding weight and compare it to their design. Furthermore, they will receive feedback from peers as well as self-assessing their product.	Children will discuss what makes a healthy balanced diet. They will spend time identifying ingredients and tools they will use in the session furthermore discussing safety rules. They will have opportunities to practise and use the "bridge" hold to chop vegetables; a peeler and grater to reinforce skills from the previous year. In addition, children will practice breaking eggs without breaking yokes and they will identify safe ways to use an oven. At the end of the session, children will evaluate their meal by tasting it and discussing what they would change if they made it again.
Knowledge and/or Skills Covered		
	Verbally explain their plans for design or cooking, linking to techniques and using DT vocabulary Refer to research while talking about their product Draw sketches at different points of the design process Draw and annotate digital designs Start to draw to scale Start to draw 3D projections, with shading for clarity Precision level: accurate 2D shapes Politely discuss their peers' work Willingness to alter and/or restart designs	Serrated knife with 'bridge' hold to cut onion (*supervised*) Use peeler on vegetables Use a grater for e.g. apple, carrot Break eggs, often not breaking yokes Use an oven to cook food (*supervised*)

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	Use: Protractor, metallic tape-measure, spirit level, sandpaper. Measure to nearest mm and 45° for angle Convert between units, eg m to cm Start to estimate length and distance Start to understand area Link their own and others' designs and products to their function and purpose Start to verbalise others' opinions that differ from their own Make choices about following advice	
National Curriculum Attainment Targets		
	Use research and develop design criteria to inform the design of functional and that are fit for purpose. Generate, develop, model and communicate their ideas through discussion and annotated sketches. 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, according to their functional properties. 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	Understand and apply the principles of a 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.
Important Vocabulary		
	Approximate, Accurate, Technique, Structure, Mechanical, Parallel, Perpendicular, Perspective, Quality, Version, Purpose, Opinion, Organise, Construct, Mock-up, Prototype, Clarify, Left/right (*secure use from any perspective e.g. discussing partners' work across the table*)	Opinion, Purpose, Ingredient, Balance, Diet, Seasonality, "Bridge" hold, Break, Yokes, Safety, Oven