

Design Technology: materials and structures

National Curriculum subject content:	
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 diagrams, prototypes, pattern pieces and computer-aided design
Make	
✓	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, 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 others to improve their work
✓	understand how key events and individuals in design and technology have helped shape the world
National Curriculum theme:	
✓	Design
✓	Make
✓	Evaluate

Y4 spring term:

volcano shelters



Key Vocabulary:	
shelter	A place giving temporary protection from bad weather or danger.
volcanic eruption	A volcanic eruption is when gas and/or lava are released from a volcano—sometimes explosively
material	The matter from which a thing is or can be made.
function	The purpose of a person or thing.
properties	The features or characteristics of an object.
strengthen	To make or become stronger.
fit for purpose	Well-equipped or well suited for its designated role or purpose.
Design criteria	A list of requirements that a product must meet.
Research	The process of retrieving information.
Design	process
Make	Combining materials and techniques to create a product.
Evaluate	To consider the effectiveness of a product.

Sequence of Learning:					
Objectives (key knowledge):					
Lesson 1: Research	Lesson 2: Design criteria	Lesson 3: Strengthening	Lesson 4: Materials	Lesson 5: Design and make	Lesson 6: Evaluate
LO: To be able to research the function and design of a shelter.	LO: To know the properties of a volcano shelter.	LO: To learn how to strengthen materials (paper).	LO: To be able to test materials to see if they are fit for purpose.	LO: To design and make a volcano shelter that is fit for purpose.	LO: To be able evaluate the shelter against design criteria.

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