

National Curriculum Objectives: In this unit, children will be taught to:			
Structures			
Skills		Knowledge	
Design	Designing an Anderson shelter featuring a variety of different structures, giving careful consideration to how the structures will be used, considering effective and ineffective designs.	Technical	To know that structures can be strengthened by manipulating materials and shapes.
Make	- Building a range of structures drawing upon new and prior knowledge of structures. - Measuring, marking and cutting wood to create a range of structures. - Using a range of materials to reinforce and add decoration to structures.		
Evaluate	- Improving a design plan based on peer evaluation. - Testing and adapting a design to improve it as it is developed. - Identifying what makes a successful structure.	Additional	- To understand what a 'footprint plan' is. - To understand that in the real world, design can impact users in positive and negative ways. - To know that a prototype is a cheap model to test a design idea.
Textiles			
Skills		Knowledge	
Design	- Designing a studded animal in accordance to a specification linked to set of design criteria. - Annotating designs, to explain their decisions.	- To understand that it is important to design clothing with the client/ target customer in mind. - To know that using a template (or clothing pattern) helps to accurately mark out a design on fabric. - To understand the importance of consistently sized stitches.	
Make	- Using a template when cutting fabric to ensure they achieve the correct shape. - Marking and cutting fabric accurately, in accordance with their design. - Sewing a strong running stitch, making small, neat stitches and following the edge. - Tying strong knots. - Decorating a stuffed animal, attaching features (such as decorative shapes) using thread. - Finishing the stuffed animal with a secure fastening (such as buttons). - Learning different decorative stitches. - Sewing accurately with evenly spaced, neat stitches.		
Evaluate	Reflecting on their work continually throughout the design, make and evaluate process.		
Digital World			
Skills		Knowledge	
Design	- Writing a design brief from information submitted by a client. - Developing design criteria to fulfil the client's request.	Technical	To know that accelerometers can detect movement.

	- Considering and suggesting additional functions for my navigation tool. - Developing a product idea through annotated sketches. - Placing and manoeuvring 3D objects, using CAD. - Changing the properties of, or combining one or more 3D objects, using CAD.		To understand that sensors can be useful in products as they mean the product can function without human input.
Make	- Considering materials and their functional properties, especially those that are sustainable and recyclable (for example, cork and bamboo). - Explaining material choices and why they were chosen as part of a product concept. - Programming an N,E, S, W cardinal compass.		
Evaluate	- Explaining how my program fits the design criteria and how it would be useful as part of a navigation tool. - Developing an awareness of sustainable design. - Identifying key industries that utilise 3D CAD modelling and explaining why. - Describing how the product concept fits the client's request and how it will benefit the customers. - Explaining the key functions in my program, including any additions. - Explaining how my program fits the design criteria and how it would be useful as part of a navigation tool. - Explaining the key functions and features of my navigation tool to the client as part of a product concept pitch. - Demonstrating a functional program as part of a product concept pitch.	Additional	- To know that designers write design briefs and develop design criteria to enable them to fulfil a client's request. - To know that 'multifunctional' means an object or product has more than one function. - To know that magnetometers are devices that measure the Earth's magnetic field to determine which direction you are facing.