

Year group:
Year 6



Term:
Spring

Construction

National Curriculum: 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 ideas through discussion and annotated sketches. Select from a wide range of tools and equipment to perform practical tasks, cutting, shaping, joining and finishing accurately. Select from a wider range of materials and components according to their functional properties and aesthetic qualities. Evaluate their ideas and products against their own design criteria. Apply their understanding of how to strengthen, stiffen and reinforce more complex structures. Investigate and analyse a range of existing products.

Key Knowledge and skills

Investigate several bird hides (temporary and permanent) and their structures.

Use the tubes as a material from which to make framework.

Reinforce and strengthen frameworks using triangulation.

In their designs, include drawings showing some alternative shelter ideas, focusing on the functional and aesthetic qualities.

Develop a range of practical skills to create a product (such as cutting, screwing, gluing, filing and sanding).

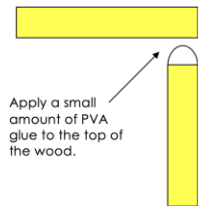
Choose and make an appropriate scale hide for a specific purpose.

Incorporate a framework and a textiles cover or cladding as appropriate.

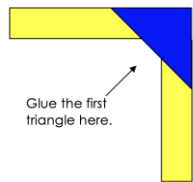
Show understanding of materials used and methods of construction.

Set out a step-by-step approach to how the hide will be made and list tools and materials used.

Joining square section wood

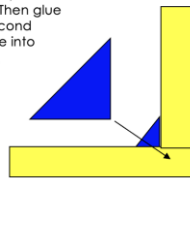


Apply a small amount of PVA glue to the top of the wood.



Glue the first triangle here.

Carefully turn it over. Then glue the second triangle into place.



Vocabulary

Scale drawing	A drawing in which measurements are proportionally reduced or enlarged.
Water resistance	Able to resist the penetration of water to some degree but not entirely.
Permanent	Lasting or intended to last or remain unchanged indefinitely.
Durability	The ability to withstand wear, pressure or damage.
Stability	The strength to stand or endure; firmness.
Frame structure	Structure that has a combination of beam, column or slab to resist the force and gravity.
Reinforce	To strengthen or support, especially with additional material.
Mock-up	Model or replica of a machine or structure, used for instructional or experimental purposes.

Evaluate

What methods did you use to join the components together?

What methods of reinforcement did you use? Are they successful?

Which material did you choose for the outer structure of the hide? Why?

How could you alter the materials used depending whether your hide is temporary/permanent?

Outcome

To research and make a model of a bird hide to be used as part of a pitch to a Dragons' Den panel of experts.

Joining techniques:

