

Previous Topic

Travel wallet

Structures – A roundhouse

Year Four




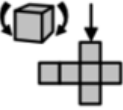


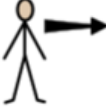





Next Topic

Tomb raiders









Prior learning:

- Experience of using different joining, cutting and finishing techniques with paper and card.
- A basic understanding of 2-D and 3-D shapes in mathematics and the physical properties and everyday uses of materials in science.

Vocabulary:

 structure	 three-dimensional	 material	 net
 adhesives	 accuracy	 joining	 assembly
 shaping	 evaluating	 innovative	 design criteria

Equipment

 card	 rulers	
 sellotape	 coloured	 paper
 scissors	 masking	 tape

Key skills:

- To investigate, develop knowledge and evaluate a range of existing strong shell structures including the materials, components and techniques that have been used. To develop and use knowledge of nets of cubes and cuboids and, where appropriate, more complex 3D shapes.
- To generate realistic ideas and design criteria collaboratively through discussion, analysis of existing products, focusing on the needs of the user and purpose of the product. .
- To select and use appropriate tools to measure, mark out, cut, score, and shape and assemble with some accuracy. To use finishing techniques suitable for the product they are creating.
- To test and evaluate their own products against design criteria and the intended user and purpose. To explain their choice of materials according to functional properties and aesthetic qualities. To know and use technical vocabulary relevant to the project.

Key Questions:

- What is the purpose of the shell structure – protecting, containing, presenting?
- What material is it made from?
- How has it been constructed?
- Are the materials recyclable or reusable?
- How has it been stiffened i.e. folded, corrugated, ribbed, laminated?
- What size/shape/colour is it?
- What information does it show and why?
- What does the product need to do?
- Who is it aimed at?
- How will the purpose and user affect your design decisions?