



Year 5 DT Knowledge Organiser: Structures (Bird Hides)



Subject Specific Skills

- Follow procedures for safety and hygiene independently
- Conduct research into user needs and existing products and evaluate these products.
- Develop a simple design brief and success criteria to assess the final product against.
- Generate and develop innovative ideas through discussion, prototypes and annotated sketches.
- Critically evaluate their own product, using the criteria created.
- Create a clear plan, including a step-by-step list of what needs to be done and resources to be used.

Prior Learning

- Understand what structures are and how they can be made stronger, stiffer and more stable.
- Experience of using measuring, marking out, cutting, joining, shaping and finishing techniques with construction materials.

Key Vocabulary

- Products, photographs.
- 3D Shapes: cubes, cuboids, pyramids.
- Target audience.
- Frame structure.
- Stiffen; Strengthen; Reinforce;
- Stability
- Design brief; Research; evaluate.
- Innovative.
- Success criteria; Function
- Annotated sketch.

Materials

- Card, paper straws, newspaper, wood, masking tape, PVA glue, pencils, rulers, scissors.

Technical Knowledge:

- Know how to join different materials together using glue or the objects themselves (straws which bend).
- Understand about the uses and purpose of the product they are making and why they are important for the conservation of wildlife.
- Know and use relevant technical vocabulary.
- Know how to safely use tools and equipment.
- Know how to create new shapes using materials.
- Understand how to strengthen, stiffen and reinforce 3-D Frameworks.



Design:

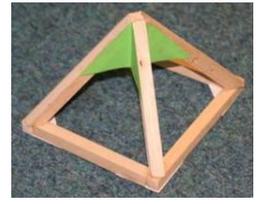
- Generate innovative ideas through research and discussion with peers and adults to develop a design brief and criteria for a design specification.
- Explore a range of initial ideas, and make design decisions to develop a final product linked to user and purpose.
- Use words, annotated sketches and information technology (computers) as appropriate to develop and communicate ideas.

What tools will you need to make your structure? Who is the intended user and what is the purpose of the structure? How will you ensure it will survive the outdoors? What steps will you need to go through to make your bird hide?

Make:

- Use a detailed sketch and step-by-step plan to create the product.
- Select and use appropriate materials and equipment accurately to ensure the structure is stable and long-lasting.

What shape will your bird hide be? Will the structure be permanent or easily dismantled? What materials will you use? How will it be joined? How will it be reinforced? How will it be finished?



Evaluate:

- To be able to evaluate a finished product. What did you most like about making the structure? What was most difficult about making the bird hide? How pleased are you with your finished product? What could you do to improve your product further?
- Carry out evaluations of a range of relevant products and materials.
- Evaluate the final product with reference back to the design brief and design specification, considering the views of others when identifying improvements.