



DT- Year 5/6 Summer Cycle B -Construction

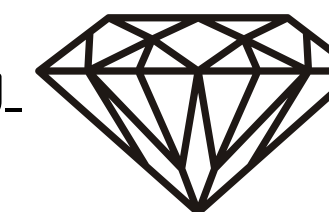
Bridge building



What do I already know? I know how to make a Roman shield, a Miners lamp and an Egyptian pulley by:

- knowing how to measure, mark out, cut and shape a range of materials, using appropriate tools, equipment and techniques
- using a range of techniques to shape mouldable materials (papier Mache and salt dough)
- using safe ways of cutting materials including a junior hacksaw
- applying their understanding of how to strengthen, stiffen and reinforce more complex structures (joining, folding, layering/corrugated, shape and own ideas)
- starting to consider how materials have both functional properties and aesthetic qualities, and chose the most appropriate material for the project

I will know how to design and build a bridge that spans the KS2 playground and which can hold the weight of a ... by



- Ensuring that my product is strong and fit for the purpose (shape, bracing and own ideas)
- Developing skills in nailing, drilling and sawing to create a product
- Ensure that materials chosen have both functional properties and aesthetic qualities;
- Justify why I have chosen a specific material

Key Vocabulary:

<u>accuracy</u>		the degree to which the result of a measurement, calculation, or specification <u>conforms</u> to the correct value or a standard	<u>bracing</u>		(of a support) serving to <u>brace</u> a structure.
<u>functional</u>		designed to be practical and useful, rather than attractive.	<u>cutting</u>		the action of cutting something.
<u>suitability</u>		the quality of being right or appropriate for a particular person, purpose, or situation.	<u>combine</u>		join or merge to form a single unit or substance
<u>mark out</u>		separate or delineate a particular section or area	<u>component</u>		a part or element of a larger whole, especially a part of a machine or vehicle.



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Abraham Darby – Builder of The Iron Bridge

Ironbridge is renowned for being the birthplace of the Industrial Revolution. Here the world's first single span cast iron bridge was constructed between 1777 and 1781 and spans the River Severn. During the 18th century, this area was rich with raw materials including coal, iron ore, water (which was used for both the generation of power and transportation), sand (for moulding cast iron), limestone to flux the slag in the blast-furnaces, and clay to make tiles and bricks.

The initial idea for the iron bridge came about in 1775, when a group of local businessmen met to discuss how communication between both sides of the river could be improved. The group was made up of, Abraham Darby III, who became the treasurer of the project, John Wilkinson, an ironmaster and Thomas Farnolls Pritchard, an architect from the nearby town of Shrewsbury.

The Iron Bridge

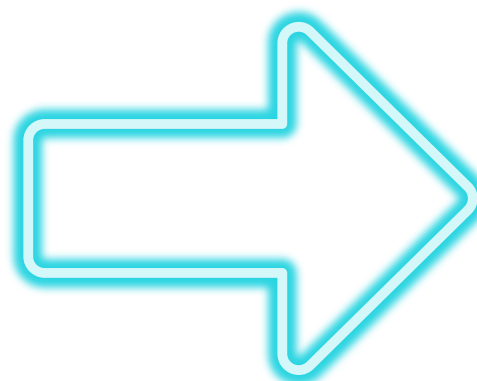


Abraham Darby



Your paragraph text

When designing
think about:



- User - who is the product for?
- Purpose - what task does the product need to perform?
- Functionality - will it work?
- Design Decisions - what choices do you have?
- Authenticity - is the product believable?