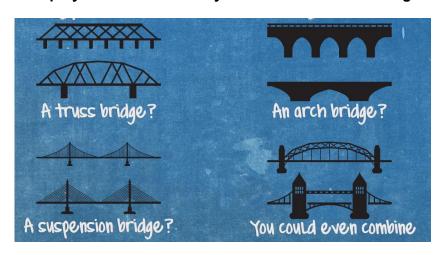
St Mary's Horsforth – Art and Design Knowledge Organiser

Year 6 - Materials and structures - Bridges-- Autumn 2



Enquiry Question: How do you make a structure strong?



What should I already know?

- Select materials carefully, considering intended use of product and appearance.
- Explain how product meets design criteria.
- Measure accurately enough to ensure precision.
- Ensure product is strong and fit for purpose.
- Begin to reinforce and strengthen a 3D frame.

What will I know at the end of the unit?

- Ways in which pillars and beams are used to span gaps.
- Ways in which trusses can be used to strengthen bridges.
- Ways in which arches are used to strengthen bridges.
- How suspension bridges are able to span long distances.
- Develop criteria and design a prototype bridge for a purpose.
- Analyse and evaluate products according to design criteria

Vocabulary	Inventor	Recommended Reads
abutment arch beam bridge compression construction	Inventor Isambard Kingdom Brunel	BRIDGES TUNNELS INVESTIGATE FEATS OF ENGINEERING
design engineering evaluate parapet pier pillar		An Editors Pay No.
product prototype safety support suspension truss		Bridges, Towers 8 Tunnels Stran hall Ander Grade

