DT Knowledge Organiser - Bridges

Key Vocabulary

bridge, span, across, length, strength, steel, strong, structure, construct, tripod, beam, truss, cantilever, arch, tied arch, suspension, cable-stayed.

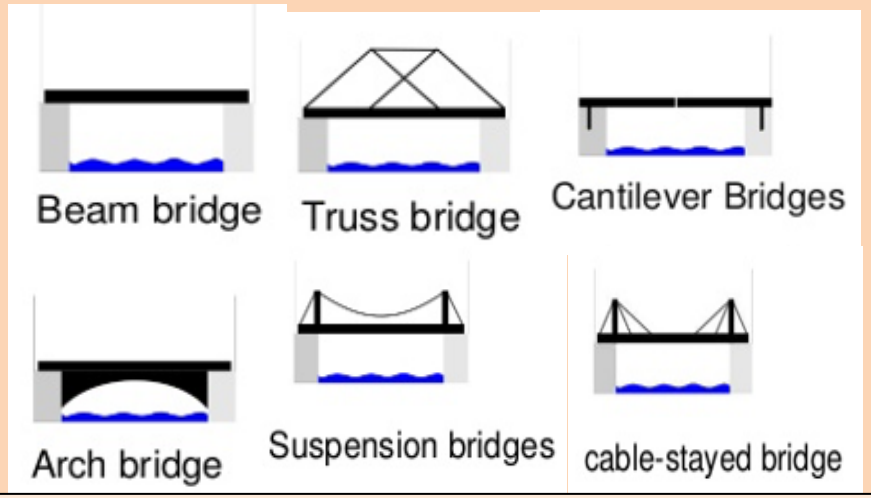
Skills

- To design and construct a bridge to hold a maximum weigh of 2kg.
- Investigate different structures to withstand this weight.
- Design and build a bridge by reinforcing and strengthening materials to hold 2kg.

Things to know

- Beam bridges are the simplest structural forms for bridge spans supported by a pier at each end.
- A truss bridge is a bridge with its load-bearing structures composed of a series of wooden or metal triangles, known as trusses.
- A cantilever bridge is a bridge built using cantilevers, structures that project horizontally into space, supported on only one end.
- An arch bridge is a bridge with abutments at each end shaped as a curved arch.
- A suspension bridge is a type of bridge in which the deck is hung below suspension cables on vertical suspenders.
- A cable-stayed bridge has one or more towers from which cables support the bridge deck.

Types of bridges



Assessment Question:

How can you strengthen materials to hold a weight?