

Design & Technology: Year 1 Brunel Bridge - Structures

Key vocabulary	
structure	something that is made up of parts that are joined together
bridge	a structure that allows people to cross over an open space
free- standing	a structure that stands alone and holds itself up
stable	not easily knocked over or broken apart
stiff	not easily bent or folded
joint	where two or more parts meet together
material	what an object is made from e.g. wood, plastic, paper

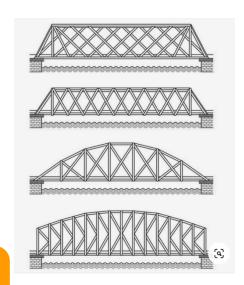
We are building on our knowledge from making boxes in Reception

This will help us learn in Year 2 when constructing the chassis for our push car

Engineering focus

Isambard Kingdom Brunel designed bridges including railway bridges in Paignton and the Clifton Suspension Bridge.



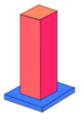


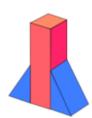
Key knowledge

A free-standing bridge holds itself up and needs to be strong, stiff and stable

There are different types of bridge that are built in different ways: suspension, arch beam

Engineers use triangles to make strong structures





It has a wide base which is very stable and can hold a lot of weight on top of it

Some materials are stronger than others. You can make paper or cardboards stronger by:

- i) making it thicker
- ii) folding it

Parts can be joined together to make a stable structure using tape or glue