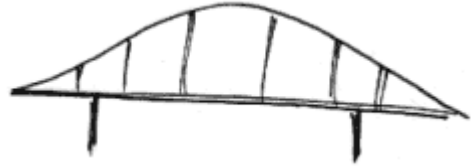


Suzy's World

Bridges - How do you build a strong bridge?

Fact

- You first need to decide what kind of bridge you need. This will be related to what you want to use your bridge for, what materials and time you have available.
- A bridge that is strong enough to drive your toy cars over may not be strong enough to carry your weight so you need to decide what your bridge is going to carry.
- Where the bridge is being built is another important consideration. If you are building it on a soft surface like sand or mud you need to consider the stability of the bridge.
- What shape would be best? You could choose from a suspension bridge, an arch bridge, or a cantilevered bridge. The shape depends on what you will use the bridge for and what would look and work best.
- If your toy train has to go under the bridge as well as over you need to consider the space available to allow this to happen.



Do you know

- The Auckland Harbour Bridge was opened on 30th May 1959. It took over 1000 people and over three and a half years to build. It's about 1020 m long used about 30,000 tonnes of concrete. Two more lanes were added on each side of the bridge and opened in 1969.
- The first bridges in the world were trees that had fallen across rivers and gullies.

Experiments you can do

Try building a bridge strong enough to carry toy cars. Use an A4 sheet of paper and test the strength of different shapes of bridge. Test your construction by placing weights in the centre of the bridge. How strong is each shape?



Other Investigations

Do you have any bridges near where you live? What kind of bridges are they? There will be pictures of famous bridges from around the world in books in your school or public library. What kind of bridge is the Auckland Harbour Bridge, the Sydney Harbour Bridge in Australia, the Golden Gates in San Francisco, The London Bridge in London?

Find out about traditional arched bridges. What were they made of and how were they made?

What famous fairytale uses a bridge as a main part of the story?