'Bridges and Structures'

Y5 Resistant Materials - Knowledge

You should be able to...

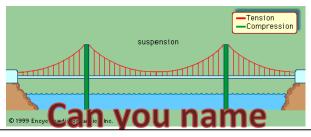
Work to build a freestanding, strong and durable structure.

Some of your structures must be able to carry weight.

Work with a selection of materials and evaluate their properties.

truss — Tension — Compression 1999 Encyclopædia Britannica, Inc.

beam Tension Compression 9 1999 Encyclopædia Britannica, Inc.



A **beam bridge** is the simplest type of bridge that you may come across. Think of a plank of wood that someone might use to cross a stream: this is a simple beam bridge.

A **cantilever bridge** uses cantilevers to create an area for people or vehicles to travel on.

An **arch bridge** uses a curved shape to spread the weight from the bridge over the curve, rather than the weight bearing straight down.

A **suspension bridge** uses ropes, chains or cables to hold the bridge. Suspension bridges can cover large distances up to around 2000 metres.

Tension Compression Compression

Structure Stability

Keywords:

Roll tubes Nuts **Bolts** Structure **Stability** Sturdy Cardboard Craft knife **Test Scissors Team work** Join **Time management** Plan Design Model **Prototype** Reinforce **Evaluate** Measure Quality **Precision Finish Freestanding** Strengthen **Properties Tension** Compression Cantilever **Beam** Arch Suspension Pasta Paper Straws

Can you help by building a new bridge?

What shape is the bridge/structure going to be?

Is there any way you can make your structure stronger?

Do you need more materials?

Is your bridge long enough?

Have you tried using different shapes for support?

What materials?





