

SPAGHETTI BRIDGES

ENGINEERING CHALLENGE 03

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The brief

Construct a free standing bridge out of spaghetti, strong enough to support a 250g bag of sugar.

The method

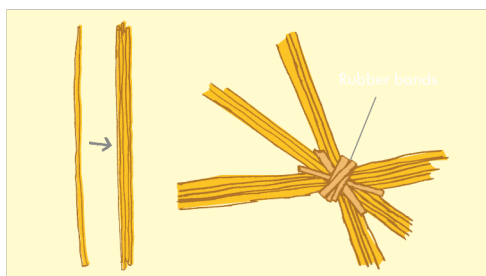
Think about bracing strands together for strength. Some shapes are better at absorbing loads – triangles are particularly strong. Rubber bands make for good junctions.

Top tip

Be patient. Through trial and error, you'll become proficient at working with spaghetti.

Materials

Spaghetti
Small rubber bands
or bag ties
Sticky tape
250g bag of sugar



How does it work?

Bridges manage two important forces: compression and tension – pushing and pulling. Too much of either and they buckle or snap.

Design icons

Why not take inspiration from these iconic bridge designs?



Beam bridge



Truss bridge



Cable stayed bridge



Arch bridge



Suspension bridge



Cantilever bridge