ENGINEERING
CHALLENGE

03

SPAGHETTI BRIDGES

THE
JAMES
DYSON
FOUNDATION

SPAGHETTI BRIDGES

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Designed by Kristian,
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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

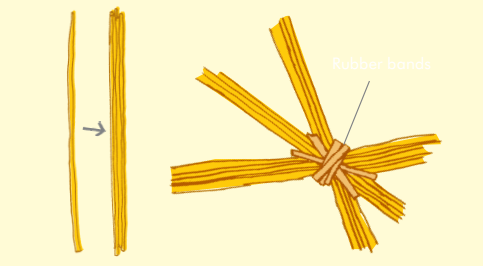
Think about bracing strands together for strength. Some shapes are better at absorbing loads – triangles are particularly strong. Rubber bands make for good junctions.

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?