

Spaghetti bridge challenge

What is a strong shape?

- Can you build a spaghetti bridge that's strong enough to hold a bag of sugar?
- Watch the video to see Dyson engineers attempt the challenge with their spaghetti replica of the Golden Gate Bridge.
- https://www.youtube.com/watch?v=Pp9U6lyolqg&feature=emb_title

What do you need?



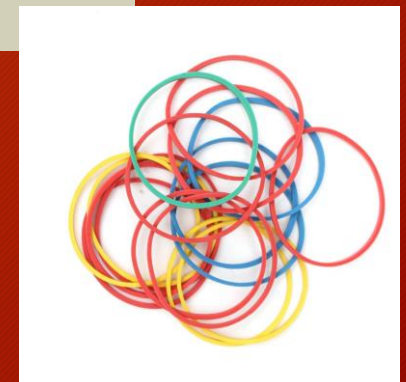
Uncooked Spaghetti



And cellotape



Not cooked Spaghetti



Or elastic bands, loom bands work too

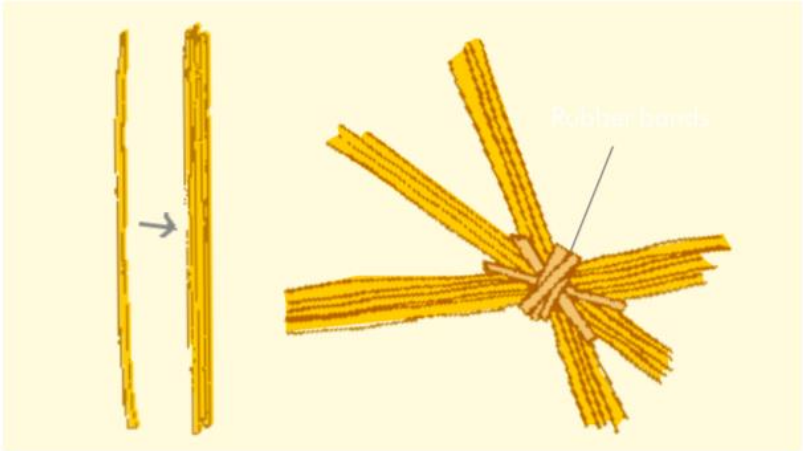


The method

- 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 (better) at working with spaghetti.

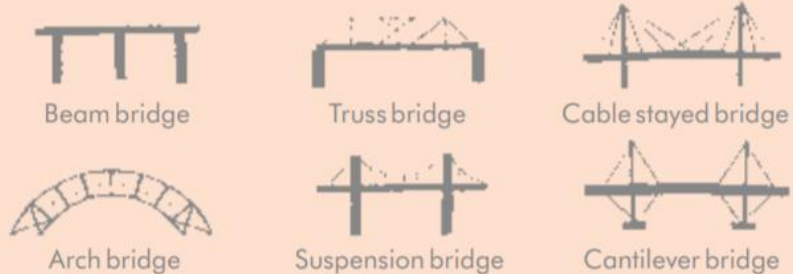


How does it work?

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

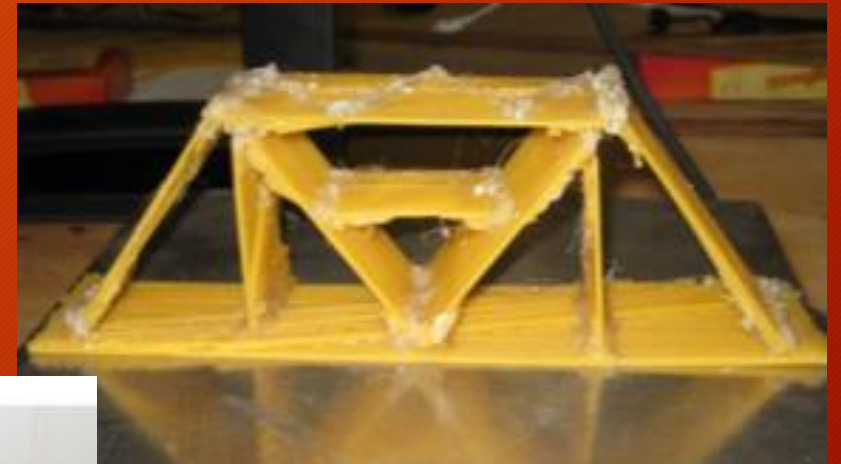
Design icons

Why not take inspiration from these iconic bridge designs?



- Beam bridge
- Truss bridge
- Cable stayed bridge
- Arch bridge
- Suspension bridge
- Cantilever bridge

Here's some examples of bridges pupils have made



Awesome builds
Which do you think is the strongest?