

Mission three: Building Bridges

The London Transport Museum is on a mission to find **Fixers** to be engineers of the future.

London Bridge station's rail bridge has too much traffic! Your mission, should you choose to accept it, is to redesign London Bridge station's rail bridge over the River Thames so it can carry more trains and makes journeys easier, faster and more fun!

Mission duration between 45min – 1.5hrs



Mission tasks

- Research with your grown-up examples of bridges in London. Which are your favourites and why?
- Draw your bridge design. Make sure you've answered all the questions in the 'Think about' section.
- Build a model of your bridge using recycled materials and/or household objects to pitch to Costain*. Make sure your bridge: **a.** Can carry 3 teaspoons. **b.** Spans a gap of at least 15 cm.
- Get a grown-up to share your creation with London Transport Museum and Costain on Twitter or via email to enter our prize draw.

For more information, visit our website at ltmuseum.co.uk/future-engineers



Mission kit

Recycled materials e.g. cereal boxes, or household objects e.g. cans, string, ruler, scissors, pens, paper, tape, teaspoons.



Things to think about:

- How will trains travel safely across the river?
- How can you make the rail bridge look interesting and fun?
- How many different lines will go across it?
- Will it support other forms of transport? For example, pedestrians or cyclists?
- How will the river boat traffic flow underneath it?



Over 7 years old? Try our extended mission:

- You must build your rail bridge to a budget of £10 million.
- Each item you use in your build cost £1 million, regardless of shape or weight.
- Using any amount of tape costs £5 million.
- Cutting or dividing your materials is free.
- Calculate the total budget for your rail bridge.



Need some inspiration?

See how we had a go ltmuseum.co.uk/future-engineers



*Who are Costain?

Costain use new technology and engineering to make transport better and to create cities for the future that improve people's lives. They recently redesigned London Bridge station.