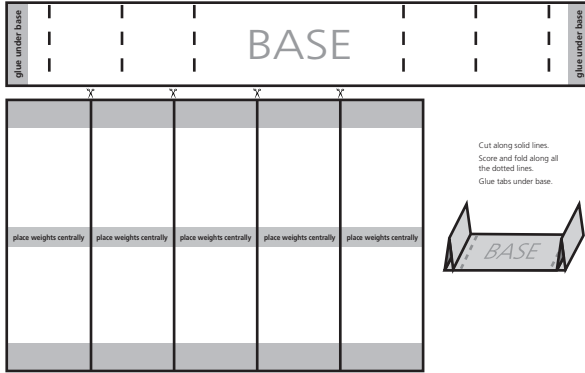


Engineers are challenged to make structures which are strong, light and efficient.

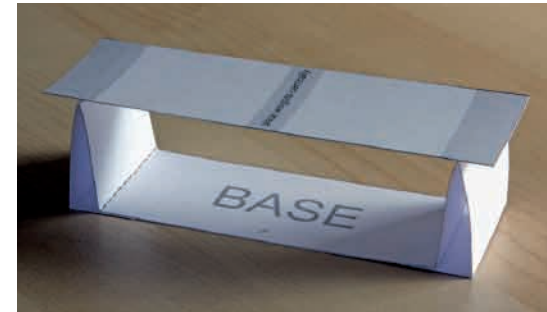
They use **triangulation**, **suspension** techniques and **arches** to achieve this.



Lendal Bridge



## Make a bridge from card using the cut-out sheet



Photos: Peter Smith Associates

How many cubes can you place near the centre before the bridge collapses?

What happens when you change the number of layers of card?

| Number of layers in span | Number of cubes supported |
|--------------------------|---------------------------|
| <b>1</b>                 |                           |
| <b>2</b>                 |                           |
| <b>3</b>                 |                           |
|                          |                           |

Now bend one piece of card and use it as an **arch**. How does this affect the strength of your bridge?

