

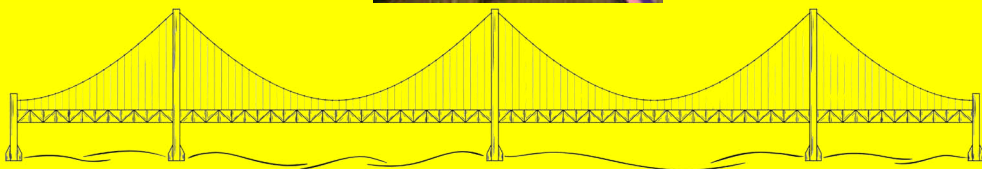
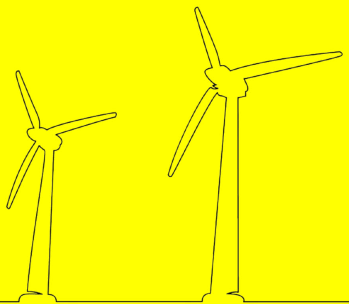


TOWER BUILDING Challenge

You can use a huge variety of items for this activity. Why not try more than one design to see what works best.

- Marshmallows or play dough and spaghetti
- Paper cups and lollipop sticks
- Card
- Newspaper
- Weights such as books/ coins

There are lots of ways you can build a tower using materials often found lying around the house. Try to find out which materials, shapes and angles allow you to build both the tallest tower but also the strongest. Have a think about designs most commonly found in famous buildings like the Eiffel Tower and investigate why.



Challenge 1 - Build a structure that can support the most possible weight. You could use books to create a sturdy base.

Challenge 2 - Build the tallest structure possible without it collapsing.

Challenge 3 - Build a bridge between 2 tables or stacks of books that can hold a weight on top.

BUILDING STEM SKILLS

WHAT ARE WE LEARNING



It is likely that a strong and successful tower will include triangles in its design. Triangles are rigid shapes and when placed under a heavy force, they hold their shape well unlike a square for example, which will be squashed into a parallelogram. Overlapping and crossing the sticks will help to make the shape stronger.

DID YOU KNOW?

The World's Largest Paper cup pyramid was built in 2016 in India and was made of 56,980 cups stretching 22 feet tall – how high can you make yours?



LINKS TO STEM JOBS...



Engineers and architects create tall structures and strong bridges, they must think very carefully about their shape and base. Like you have had to do in this activity, they also have the deal with time and material limitations when they are working.

WHY NOT TRY

Next time you are on a walk out in your local area, look at buildings, bridges and other structures which you think have been designed and built by engineers and architects. What similarities can you spot? What shapes can you see at work? Do you think engineering is all around us?

