

CHALLENGE 3: Make the strongest bridge using only one piece of paper!

Now it's your turn to use science to build a bridge that can hold the most paperclips! You can cut it, fold it, and/or tape it however you want. You also get to put the paperclips on the bridge yourself! The only rule is that your bridge must be at least 5 inches long total, so one inch can be attached on top of the table, while 4 inches hang off. Compete with your friends to see who can add the most paperclips before their bridge bends past 2 inches.

Based on Challenge 1:

When you test your bridge, where on the paper should you start adding paperclips so it bends down the least?

- A) Closer to the table
- B) Farther from the table
- C) Right in the middle

Based on Challenge 2:

What direction should your bridge be turned so it is the strongest?

- A) With a short edge along the table, so the bridge is long and skinny
- B) With a long edge along the table, so the bridge is short and wide

Should you think about folding your paper to make your bridge shorter and thicker?

- A) No, because a longer bridge is stronger
- B) Yes, because a thicker bridge is stronger

Remember: your bridge does not have to be a rectangle! Try folding it into a triangle or hexagon, rolling it, twisting it, cutting it; anything you can think of!

Work with your team to draw some ideas here.