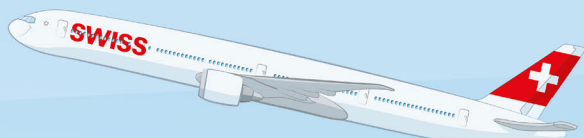


A bridge out of paper?!



Bernie and Lexi always keep their eyes open during their adventures: Namely they can often learn a lot of new things in the process and that is very important for the two inventors! Today they are doing an experiment to see how stable a bridge out of paper can be.
Out of paper? Yes, you read it correctly - but see for yourself!

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What you need:

- 2 identical items, for instance 2 tins, glasses or similar
- 3 pieces of normal, white paper (i. e. out of the printer)
- Weights for testing, i.e. building blocks or toy cars



What to do:

1.

Fold a piece of paper lengthwise in the middle and place it between the two items like a bridge.



2.

Now, place a first weight on top of it. What do you notice? The bridge is no longer stable and cannot hold the weight.



3.



What can we change? Take another piece of paper and fold it like an accordion. Use this sheet of paper as a bridge and ideally place a simply folded piece of paper over the top so that you can place the weights on it more easily.

4.

Now start the comparison test: Place the previous weight on top of this new bridge. It is no problem, is it? You can place further weights on top, because this bridge is much stronger.



Why is the second bridge so stable?

By folding the piece of paper it is no longer just strengthened in the length and width, but also in its height. This enables it to carry more weight. Perhaps you have already seen rooves out of corrugated sheet iron? This is the same principle: Corrugated sheet iron is more stable than flat sheet iron. By placing the piece of paper that is simply folded in half on top the weight is distributed evenly across the bridge, which provides extra support.

