Ages: 6-8

Paper bridges



1 hour · indoors · all year round

Prep:

- A4 paper - 6 sheets: 3 regular, 3 thick
- Two identical boxes - supports
- Identical building blocks - 20
- Masking tape
- Ruler
- A4 sheet and pencil

Step by step (~1 hour):

1. Set the supports exactly 20 cm apart and mark their positions on the table with tape. Keep the span the same, or the comparison won't be fair.
2. For the first bridge, lay a sheet flat across the supports. For the second, fold an identical sheet into an accordion with 2 cm folds.
3. Draw a two-column table. Place blocks in the middle one at a time, counting aloud. Stop and record the number as soon as the bridge touches the table.
4. Repeat with the second bridge. It will usually hold several times as many blocks; the difference is easy to see.
5. Change just one thing about the weaker bridge: fold its edges up by 2 cm. Test it again and compare it with its own earlier result.

If it's not working: If the bridges fall before testing, shorten the span and use identical supports. First make sure they stay up without a load.

Playing together: A child aged 4-5 hands over the blocks; a child aged 6-8 builds and counts; an older child keeps the test conditions the same and records the result.

Make it your own: Fold paper into an accordion, a tube or raised edges; change the span; test whether the position of the load makes a difference.

Let's talk:

- "Which shape held more, and why?"
- "What will we change on just one bridge?"
- "Why must the distance between the supports stay the same?"

Why try this:

Your child compares structures under the same conditions, records observations and tests whether a change helps. Finding an explanation matters more than building the strongest bridge.