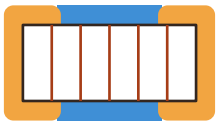
Bridge test sheet

GOAL: 10 COINS

Guess first. Then test. Write how many coins each bridge held before it fell.

Engineer: _____ Inspector: _____

Bridge	My guess	It held	10 or more?
 1 Flat			
 2 Zigzag			
 3 Zigzag, turned			
4 My own design			

Seen from above: books river paper

Draw your strongest bridge. Show its shape.

Inspector's stamp

Inspector's cheat sheet

Your job: be the Inspector

1. Test every bridge the same way. Same gap. Same coins. Same spot.
2. Add coins one at a time, in the middle. Count out loud.
3. Don't fix the bridge. Ask, "What did you see? What could you change?"
4. When a bridge falls, say, "Not a fail. A clue!"

Grown-ups: tests can surprise you. Here is what to do.

If this happens	Do this
The flat bridge holds 10 coins or more	The gap is too small. Slide the stacks apart a little and test again.
A bridge slides off the books	Let two fingers of bridge rest on each stack. Narrow the gap a little.
The zigzags spread out flat	Press each fold sharp. Squeeze the zigzags closer together.
The turned zigzag holds fewer than 10	Ask, "Where did it bend first?" Try narrower folds, then test again.
The coins roll or slide off	Set them down gently in the dips, near the middle. No dropping.
Your engineer wants tape or more paper	Say yes! It is a new design. Test it and write it down as bridge 4.
You run out of coins	Bridge still standing? Add spoons, or call it the champion.

More than one shape works. A tube, or a bridge with its sides folded up like walls, can pass the test too.

Safety: coins are a choking hazard for children under 3. Count them back in at the end.