A Bridge Too Far?

A cantilever bridge is built with two beams that project toward each other to join and form a span.

**What to do:** Stack the notebooks on the edge of the table. Slide the top book halfway out from stack and over the table’s edge. When it balances, slide it back a little. Move out the next book along with the top one until they balance, and then slide them back a little. Add another notebook and move the top three out and slide them back a little after they balance. Continue in this same way until all six notebooks are staggered.

**What happens:** The top notebook seems to be suspended in air, but the notebooks do not fall.

**Why:** You have found the center of gravity, the point at which all the weight of an object seems to be concentrated. Although the top book appears to be suspended in air, more than half the weight of the stack of notebooks is resting on the table.

YOU NEED
- six notebooks or thin books
- table