

Mathematical moments: Measuring with 4 & 5 year olds

Comparing lengths and weights

Does the heaviest car go furthest down the ramp?

The children were keen to find out which cars went furthest down a ramp. Their teacher, Sue, had suggested they set the ramp up outdoors so they could use the paving slabs to measure how far the cars went. The cars were similar in size, but some went a lot further than others. Olive said this was because they pushed some harder at the top of the ramp. The children decided they would race the cars and just 'let them go' so it was fair. Sue encouraged them all to predict how many paving slabs each car would travel over before letting it go. *I bet the red car will go three slabs!* said Yusuf.

'The red car goes furthest because its heaviest!' said Seb. *'But the blue car is heavy too and only goes one slab'* said Olive. *I think the heaviest cars go further,* said Yusuf. So they could test this idea out, Sue set up an elastic spring balance box over a whiteboard. They weighed each car by seeing how far down the elastic stretched and marking the bottom of the box. Sue encouraged them all to predict how far each car would pull the spring down. *I bet the red car goes down a lot more than the others!* said Yusuf. After labelling the marks, they found the red car was heaviest, then the blue, then the green. They then 'raced' the cars again to see if the heavier cars did go further.



You can make an informal spring balance with elastic bands and string tied onto a cut-off carton. <https://www.youtube.com/watch?v=YUDzLOVPZM8>