

Momentum and Marbles

Any moving object with mass will have momentum.

You will need:

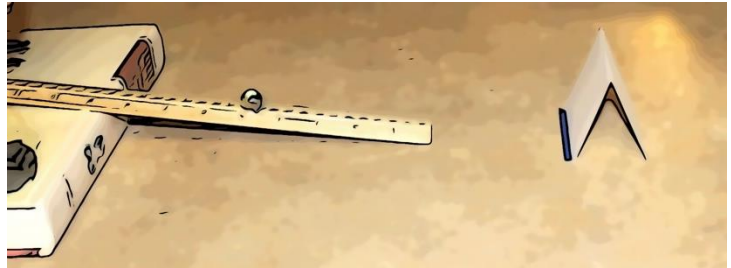
- Two marbles – one large and one small
- A ruler (with a groove in the middle)
- Some books to create a ramp
- A piece of card
- Sticky tape

Create a ramp using the ruler and the books on a smooth surface.

Place the folded piece of card a little way back from the bottom of the ramp.

Mark where the card is placed using the sticky tape so you can reset it in the same position.

The activity will show how much momentum each marble has. The marble will roll down the ramp and push the piece of card back. The further the card is pushed back, the more momentum the marble has.



Firstly try both marbles. Which one do you predict will have the most momentum?



Next increase the ramp using two books. What do you think will happen to the marbles momentum? Di the card get pushed back further because the marble was going faster?

Why not record your results for both the small and large marble. You can measure the distance the card was pushed back. You can try each marble on each ramp at least three times and calculate the average distance.

