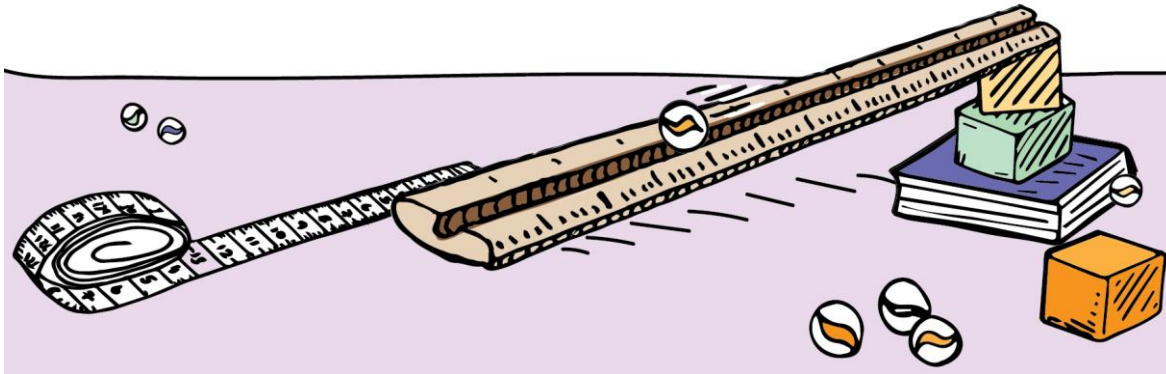


# MARVELOUS MARBLES AND RELIABLE RAMPS

Science in motion | Gravity and friction | Activity A2



## WHAT TO DO

Use the rulers and blocks to make a ramp.

- Decide on a starting point along the ruler.
- Place a marble here and let it go (with no push).
- Record how far the marble travels on the chart below (Trial 1 Test 1).
- Repeat this same test two more times and record your results.
- Now change the angle of your ramp and repeat the marble tests from the same place on the ruler that you used in test 1.

## Things to think about

Why is it good to do each trial 3 times?

What other things should we be keeping the same?

What “pulls” the marble down the slope?

What are some other ways of showing this “pull”?

What do we notice increasing with the steeper angle?

So how do you make the marble go faster down the ramp?

### Things you'll need

Ramps such as:

- measuring rulers with a groove down the length
- or 2 rulers set beside each other with a small gap between them to roll the marble down

Blocks, books or box to set height of ramp

Marbles

Measuring rulers or tape measures

Post-it notes or chalk (to mark the end of the “run”)

Make a group statement about the relationship between gravity and the steepness of the slope.

Have you noticed this in everyday life? Where?

## Result charts

Trial 1				
Angle =	Distance the marble travels			
Starting position on ruler in cm	Test 1	Test 2	Test 3	Average distance in cm

Trial 2				
Angle =	Distance the marble travels			
Starting position on ruler in cm	Test 1	Test 2	Test 3	Average distance in cm

## Teacher support material

For further activities and curriculum support:

[Science in motion \(Waka Kotahi Education Portal\)](#)