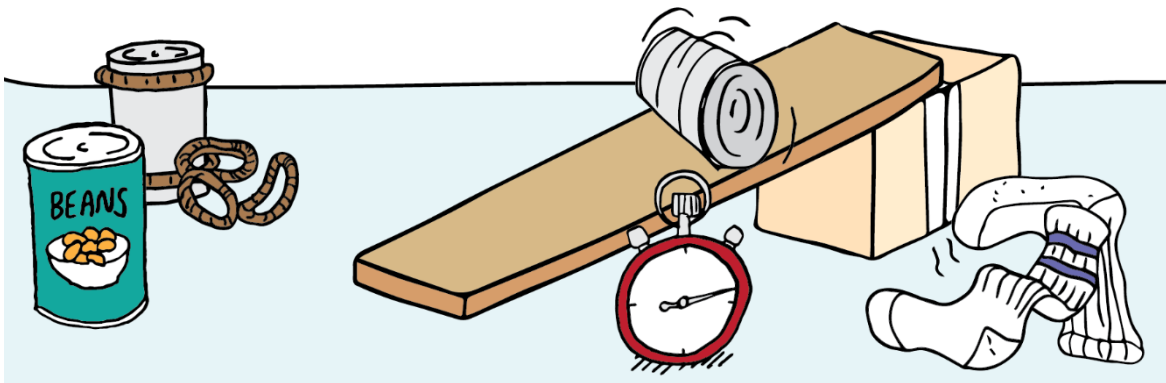


# SLIPPERY SLOPES AND CANS ON THE RUN

Science in motion | Gravity and friction | Activity A3



## WHAT TO DO

Using the gear provided, explore what happens when you roll the can down the ramp.

- Time how long it takes the can to roll down the ramp and record that time below.
- Work out a way to keep each trial the same and record your results.
- What effect does adding a hair tie at each end of the can have on the time it takes to roll down the ramp?
- What effect does putting the can in a sock have on the time it takes to roll down the ramp?
- Discuss your results within your group. Answer the questions below.

## Things to think about

What is “pulling” the can down the ramp?

Why is it important we keep the ramp the same each time?

Which of the tests makes the can roll faster or slower?

Why do you think this might be?

How could you further test or check your ideas?

### Things you'll need

Ramps for rolling down (longer ramps give more 'time' to time)

Blocks to set height of ramp (could be books, a box, blocks etc)

Can of food (e.g. spaghetti)

Thick hair ties (at least 5 per group)

Socks (various thicknesses and textures)

Stopwatch or timer on a device

Discuss your results with another group. How do their results compare to yours? If there are differences, can you suggest why?

Can you describe what friction is in relation to this investigation and/or everyday life?

Make a group statement about how friction effects speed.

Does this relate to a similar thing you have noticed in life around you?

## Results chart

Can covering	Time taken to roll			Average time in seconds
	Test 1	Test 2	Test 3	
Normal can				
2 hair bands				
?? hair bands				
Sock on can				
Your own idea				
Your own idea				

## Teacher support material

For further activities and curriculum support:

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