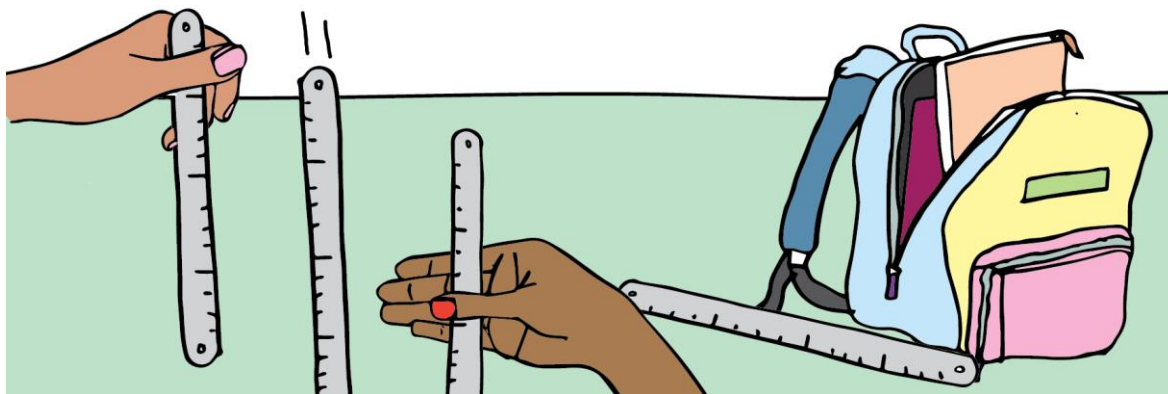


DISTRACTION

Science in motion | Design for safety | Activity C3



INVESTIGATION 1

Work in pairs. You will both have a turn as this investigation requires you to work together.

1. Have one person hold a 30cm ruler at the 30cm marked end and let it hang straight down.
2. The other person places their thumb and forefinger on either side of the ruler at the 0cm mark (but not holding the ruler).
3. Without warning, the person holding the ruler lets go and the other person tries to catch it as soon as possible. Try to be tricky and not let your partner know when you will drop the ruler! You may each try this several times to get the technique right before you start recording your results.
4. Measure the distance above where the ruler is caught.
5. When you are happy with the technique, complete 10 trials, recording your result each time.

Now swap over and repeat steps 1 - 5.

Things you'll need

30cm ruler

School bag or lunch box
or other distractions

Distraction result sheet

INVESTIGATION 2

This investigation uses the same method as Investigation 1 but introduces a distraction. Something that will take your attention away from what you are doing. This needs to involve using your other hand or looking in another direction.

Some ideas:

- you are trying to find something at the bottom of your school bag
- you are trying to unwrap a snack from your lunchbox
- you are talking to someone across the room and not watching the ruler
- you are changing a song you were listening to on your phone.

While you are doing one of these things your partner will drop the ruler and then you record the measurement.

Take 10 measurements, then swap over so your partner has a turn being distracted.

Record all results.

Record findings

Use the separate distraction result sheet from your teacher to write down the results for you and your partner.

Think and discuss

Did you develop a reliable and repeatable technique?

Are you sure of your results? What would you change if you do it again?

How impartial and consistent were you? Was it tempting to be competitive and change the results slightly?

How many steps inside your body are involved between seeing the ruler falling and being able to grab it?

What is the relationship between reaction time and distraction?

Based on what you have seen about reaction times and distraction, what recommendations would you make to other students who are scooting, biking or walking to school?

Teacher support material

For further activities and curriculum support:

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