

L.O: To calculate and interpret the mean as an average.

Steps to Success:

- Measure twice to check for accuracy.
 - Multiplying by 2 to find double
 - To calculate the mean (the average):
- 1) add up all the numbers (in today's case the length of 10 strides is our total)
 - 2) divide by the total of how many there are.

KEY VOCAB:

Average: An average is a number that summarises a load of data. Mean, mode and median are all types of average.

Stride: a long decisive step.

Starter:

Solving Problems with Ratio & Proportion	Back to Basics
<p>1.) There are 8 boys and 12 girls at a birthday party.</p> <p>How do you write the ratio of boys to girls?</p> <p>2.) There is a brick wall made from red and blue bricks. The wall is made with 1 red brick for every 4 blue bricks.</p> <p>What proportion of the wall is made from red bricks?</p>	<p>3.) $\frac{3976}{28} =$</p> <p>4.) $6,364 \times 27 =$</p> <p>5.) $5,499 + 1,276 =$</p> <p>6.) $7,354 - 2,882 =$</p>

Main Activity:

1. Measure one stride in centimetres.
2. Then take five strides.
3. Measure the distance you have travelled (for 5 strides) in metres and centimetres.
4. Double this to give the length of 10 strides.

5. Calculate the average stride length.

5. Repeat this process to find the average stride length of other people in your home.

6. Who has the longest stride?

7. Who has the shortest?

You may want to draw a table to record your results. You could do this on a piece of paper using a ruler and pencil or if you have access to a computer you could do it in Word.

WAGOLL:

Name	Length of 1 stride (cm)	Length of 5 Strides (m and cm)	Length of 10 strides (5 strides x 2)	Average stride length (cm)
Mrs Bland	78cm	4m 20cm	8m 40cm	(840cm / 10 = 84cm)
Child 1				
Child 2				

Averages are used to help us summarise a large amount of data. In science it is useful to use averages, like we have here, as it allows for a fairer result (our first stride may be larger/smaller than our average stride once we get moving).

Challenge 1: Work out how many strides you would have to take to walk a kilometre! (Draw on what you know...how many metres are there in 1km? Could rounding come in useful here?)

Challenge 2: How about exploring if there is any correlation between a person's average stride and how tall they are? What would you expect to find? Do the results support this?