Now and Then!

The Olympic Games were held in London in 1908, 1948 just after World War 2, and again in 2012. The 2016 games are in Rio De Janeiro from 5th to 21st August.

Some track event results are given in the table below.

How far is 100m? How far is 200m?...
Can you imagine 100 metres? How many times do you think you need to run the length of your school hall to run 100metres? What about the length of your school playground?
Now measure it. How accurate were your estimates?
How long would it take you to run 100 metres?
How far could you run in 10 sec? What about 20 sec?

Find out the results for 2016 and fill them in on the table. How did the results differ over the years? Could you display this data in other ways?

Could you have predicted the results for 2016? What reasons can you give for your answer?

Run your own 100 metre class race timing the winner in seconds to one decimal place.
Take photos of your race.
The best photographs will be submitted to GWR for possible included in the Guinness World Records Book.

1908	1948	2012			2016		
Times	Times	Athlete	Country	Times	Athlete	Country	Times
100 metres 10.8 secs	100 metres 10.3 secs	Usain Bolt	Jamaica	100 metres 9.6 secs			
200 metres 22.6 secs	200 metres 21.1 secs	Usain Bolt	Jamaica	200 metres 19.3 secs			
400 metres 50.0 secs	400 metres 46.2 secs	Kirani James	Granada	400 metres 43.9 secs			
800 metres 112 secs	800 metres 109 secs	David Rudisha	Kenya	100 metres 100.9 secs			
1500 metres 240 secs	1500 metres 229 secs	Taoufik Makhloufi	Algeria	1500 metres 214.1 secs			

Inspired by http://nrich.maths.org/8171

The **Now and Then** activity is suitable for all ages. Learners compare how long they take to run 100 metres with data about Olympic records going back to 1908 and with the Rio 2016 Olympics.

It may also be helpful to see how far they can run in 10 seconds and 20 seconds so that they understand just how quickly these races are run.

Learners could be asked to draw graphs to represent the data.

Older learners cuold mark out the track and time the race.

The lesson could involve discussion of measures of distance, time and speed.

To prompt discussion about fitness and training and the scientific basis of what affects the results and also to stimulate some good creative thinking, the teacher can ask questions like:

'What do you think about these results getting better and better as time goes on?'

'What might be the reasons for this?' and

'What about the results in another 100 years time?'