

# Maths within PE

In maths you learn that: **Speed = Distance travelled ÷ Time taken**

In PE you will need to consider speed when working out how fast someone runs, cycles or swims a given distance. **Comparing speeds** allows you to analyse performance.

Speeds can be given in **different units** including metres per second (m/s) and kilometres per hour (km/h).



Usain Bolt took Gold in the 100 metres at the 2012 London Olympics in 9.63 seconds.

$$\text{Speed} = \text{distance} \div \text{time}$$

$$\text{Speed} = 100 \div 9.63$$

$$\text{Speed} = 10.4 \text{ m/s}$$

In PE the multi-stage fitness test, also known as the bleep test, is used to **estimate** your maximum oxygen uptake or VO<sub>2</sub> max. The test is an accurate test of your Cardiovascular fitness. The test involves running continuously between two points that are 20 m apart from side to side. These runs are synchronized with beeps played at set intervals.

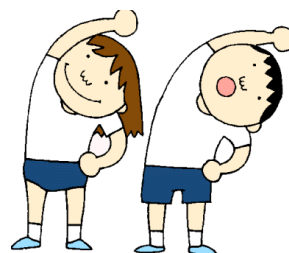
An athlete's performance will vary from event to event depending on their level of fitness at the time and the conditions they are competing in. It is useful to **measure** performance on different occasions and use an "**average**" measurement to give a more balanced indication of their overall performance. There are three main types of average: **mode**, **median** and **mean**.

Physical Education isn't just limited to what you do in PE lessons. At school you have the opportunity to participate in the

**Duke of Edinburgh** Award Scheme which gives you the chance to go on expeditions where you will need to **plan** your own route using maps. **Map**

**reading** links strongly with your maths lessons involving work on

**coordinates** and **bearings**.



At Stanley High School