

TL 6: Comparing like with like.

To complete an accurate and fair comparison between men's and women's improvements, as many variables as possible should be held constant. If you compare men and women over the whole time that each of them have competed, then there appears to be no event where the women have improved more than men. However this is not a fair comparison, one reason is that it gives the men more time to improve and so the women may have improved faster.

There are several possible options for completing a 'fair comparison' which pupils may offer as suggestions or may be suggested by the teacher if pupils are unable to provide suggestions

- Improvement from a common starting year (women's first performance or other significant year) to most recent performance
- Improvement from a common starting year (women's first performance or other significant year) to the best ever Olympic performance
- Improvement from the first performance of each sex over a common time frame

There are other possibilities, often more sophisticated, such as calculating relative rates of improvement (though we do not suggest introducing these) and there are clearly pros and cons to each method of comparison. Pupils should choose which comparison method they believe is the most fair, while stronger pupils/classes may be encouraged to justify why they believe the method they chose was the fairest.

800m model

The comparison below compares the improvement in men and women over the time women have been competing in the 800m and can be used as a demonstration if/when pupils raise this as a method for comparing improvements.

	1928 performance (s)	2008 performance (s)	Difference (s)
Men	111.8	104.7	7.1
Women	136.8	114.9	21.9

For teacher background, the table below shows the difference in comparisons when you move from comparing over the whole Olympic period to using the men's improvement over the same period as women.

Event	Women's improvement	Men's improvement from	Men's improvement from
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	from when they first competed	when they first competed	the same year as the women
100m track	1.42sec from 1928	2.31sec from 1896	1.11sec
400m track	2.38sec from 1964	10.2sec from 1896	1.11sec
800m track	21.9sec from 1928	26.4sec from 1896	7.2sec
Long jump	1.34m from 1948	2.2m from 1896	0.72m
Shot Putt	6.81m from 1948	10.29m from 1896	4.39m
Javelin	27.74m from 1932	35.74m from 1908	17.86m
100m freestyle	29.1sec from 1912	35sec from 1896	16.2sec