

Centre Event type awards.

The centre is instigating a few new awards. These will be based on performances in particular event types for Males and Females: Sprints, Distance runs, Walks, Hurdles, Jumps, and Throws. Possible advantages of these new awards are:

- It will foster some inter-age group competitions within the centre.
- Athletes that are good a particular event type will be acknowledged.
- It gives us something interesting to add to the newsletter each month.
- It may spur athletes on to always do their best.

Point system

The point system proposed is based on 100 points being awarded for equalling the centre record for the event in their age group. If someone beats the record, then they receive more than 100 points. If they are under the record, then they receive less than 100 point. So the basic formula for field events will be

$$\text{Field Event points} = 100 \times \frac{\text{performance}}{\text{record}}$$

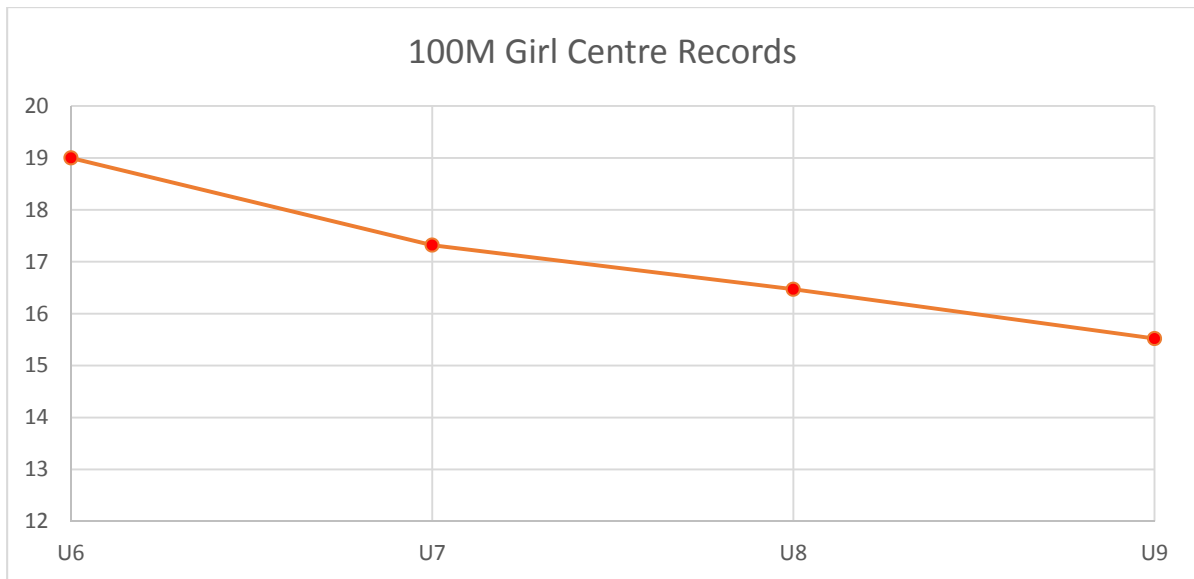
For example, the record for the U9G triple jump is 8.20m. If an athlete in that age group jumped 7.5m, then their points would be

$$\text{Points} = 100 \times \frac{7.5}{8.2} = 91.46$$

The track formula is a little more complicated as having a smaller time than the record needs to be more than 100 points. The points calculation we will go with is

$$\text{Track Event Points} = 100 \times \left(2 - \frac{\text{performance}}{\text{record}} \right)$$

The problem with these is that if someone is born in October 2004 and September 2005, they are competing against the same record, and points are awarded accordingly. But someone born in October 2005 will obtain more points for a similar performance to someone born in September 2005 because they are in a different age group. We reduce this effect by considering a kids age within an age group and creating an age-adjusted record for each athlete to calculate their points. In the graph below, we have plotted the records for the 100M for the U6 to U9 girls. Picture a hypothetical U8 Girl born on 1 October. We use the record for the U8 girls for calculating their points. If the girl is born on 30 September, then we calculate an age-adjusted record close to the U7 record. If the athlete is in the middle, then we calculate a value in the middle. Calculations are based on the straight line shown.

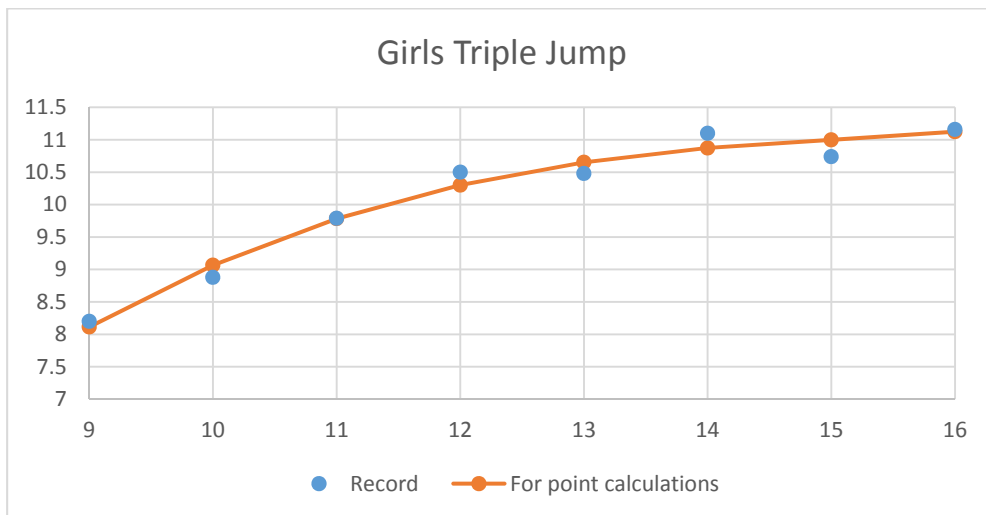


The actual calculation of the age adjusted record for calculating the points is given by

$$AAR = LRec \times \frac{Days}{365.25} + Rec \times \left(1 - \frac{Days}{365.25}\right)$$

Where *Days* is the number of days the athlete's birthday is after 1 October, *Rec* is the age group record and *LRec* is the record of the record for the age group below.

The next issue to deal with is the uneven nature of some of the records for events. Viewing the below graph shows how the records (blue dots) for some events are too up-and-down to get a fair comparisons across all age groups. To deal with this we can plot a smooth curve through the graph and use this curve for calculating points rather than the actual records. Using the below red curve gives a fair method for calculating points no matter which age group the athlete is in.



There are other issues with the up and down nature of the hurdles (changing heights) and throw events (with changing weights). These are all considered individually.

Qualification for the end of season awards.

There are a number of ways we could specify a qualification requirement for the awards. The particular method we have decided on is the *Average of the best 'n' performances*.

Event Type	Throw	Jump	Sprint	Distance	Hurdles	Walks
n	14	14	10	6	6	3

If event cancellations make it difficult for an age group to meet any particular the number of events required, then the number of performances will be altered accordingly.

Interim leader boards published in the newsletters will simply be based on average of performances and will not consider the qualifying conditions.

Sprint and Distance events would basically be the 2 shortest and 2 longest runs for the age group, however an age group needs to be doing at least 800m to be considered for the distance awards.

Event	6	7	8	9	10	11	12	13	14	15	16
60m	S	S									
70m	S	S	S	S	S	S	S				
100m			S	S	S	S	S	S	S	S	S
200m								S	S	S	S
300m											
400m				D	D						
800m				D	D	D	D	D	D	D	D
1500m						D	D	D	D	D	D