Small Planes Support Information

Use the guidance below to *estimate* distance flown for your research data and to *calculate* the average speed flown to compare with other planes.

**DISTANCE** – Use your pace or step to estimate the distance your plane has travelled. Measure a single pace and then multiply that by the number of paces you walk to collect your plane.

**Example:** If my pace measures 60cm (or 0.6m) and my plane travels 5.5m

 0.6 x 5.5 = 3.3m

**SPEED (VELOCITY)** – Using a stopwatch or a phone to measure time, record the time your plane flies from leaving your hand to stationary (you will require a second person to help you record this). Then use your estimating skills to measure the distance the plane has travelled. You can use this information to calculate the average speed (velocity) of your plane.

**Example:** If my plane travels 10 metres in 5 seconds how do I convert **m/s** (metres per second) into **mph** (miles per hour)?

There are approx. 1600 metres in 1 mile.

To convert metres travelled into miles travelled:

 10/1600 = 0.00625. My plane has travelled 0.00625 miles

There are 3600 seconds in 1 hour (60 seconds x 60 mins).

To convert seconds into hours:

 5/3600 = 0.00138. My plane has flown for 0.00138 hours.

mph is miles/hours = 0.00625/0.00138 = 4.529 or 4.5

Therefore, my plane has flown at an average speed of 4.5mph