

Using the Dartfish data table to calculate velocity

You must have something of known length in the video in order to calculate velocity. Therefore, you need to use the measurement tool first.

- 1) **Measure an object of known length in the video.** Make sure you right click on the measurement and select, “set as reference” and enter the correct measured length of the object.
- 2) **Select the data table and draw a data table with at least 3 columns and 3 rows.**
- 3) **Place a cross hair “+” on the object that you want to calculate the velocity of.**
- 4) With the cross hair still selected (a white box should be on it), **hold down the “ctrl” key and right click on “data” in the data table** (top of the second column).
- 5) **Select the type of velocity you want to calculate.**
 - *Display (x,y) of 2nd drawing in this column* (for resultant velocity)
 - *Display x coordinate of 2nd drawing in this column* (for horizontal velocity)
 - *Display y coordinate of 2nd drawing in this column* (for vertical velocity)
- 6) A table titled, “Data Table Properties” will appear. **Take off “Automatic mode” (remove the check mark so the box is empty) and press “OK”**
***Numbers will appear at the bottom of the table after completing this step.
- 7) **Right click on the numbers in the table and select “Insert entry in Data Table”**
- 8) **Move the video** ahead one frame if you want an instantaneous velocity, or a couple of frames if you want an average velocity.
- 9) **Move the “+”** to the same point on the object that you had it before (you will notice the numbers in the last row will change as you move the “+”)
- 10) **Right click on the number at the bottom of the data column and select, “Insert entry in Data Table”.** You will notice a number enters into the third column – this is your velocity.

You can continue to track the velocity of the object at selected intervals by repeating steps 8-10.

NOTE: If your measurement is in Meters, then the velocity will be in meters per second. If your measurement is in feet, then the velocity will be in feet per second etc. Ignore the negative sign if it appears before the velocity.