

TRACKER INSTRUCTIONS:

- The Smarter Every Day Video located on Wikispaces demonstrates the tracker project.
- The following instructions explain how to:
 - Install Tracker
 - Find the acceleration of your object via the software “Tracker”. You can follow the same basic instructions to measure different quantities using this software.

INSTALLING TRACKER: Go to Physlets.org: <https://physlets.org/tracker/> to download Tracker

USING TRACKER:

1. Take a video. Upload video to computer.

For best results, measure the movement of a large object and use objects with good contrast with the background, such as dropping a black object with a white wall behind it.

2. Open Tracker. Upload video to Tracker. (video>import>open file)

3. Click on the light blue icon in the tool bar that looks like a measuring stick with a 10. (Calibration tools>new>calibration stick)

4. Drag the stick to over the object you measured. Under the toolbar, type in your measured length. Include units.

5. Click Create>Point Mass>mass A>autotracker
6. Control+shift+click on the object you want to track.
7. Click on search in the upper left hand corner of the popup autotracker window.
8. If it cannot track your object:

Delete and retry with a different object selection. Note: if the object starts moving too fast, it will lose tracking. You can skip or accept points as necessary. It may take multiple tries for the program to properly track the object and not lose it. If you need to try again, click delete>clear all. Then reselect your object (step 6).
9. Click “Stop” in the pop-up window when you are done tracking the object.
10. In the upper right hand corner of the main window, click on the x (located by the y axis). Select velocity magnitude. This will change your graph from position vs. time to velocity vs. time.
11. Right click anywhere on the graph. Select analyze.
12. A new window will pop up. Working in the new window:
13. Click analyze>curve fits.
14. Click and drag over the graph to select the data you want to analyze. The data points will turn yellow.
15. In the lower right hand corner of the graph, you can read slope as parameter A. This is your acceleration.