Getting good video:

For video that’s easy to analyze, make sure

* the object is well lit
* the object shows up well against the background
* the iPad camera is stationary
* the object moves in a plane parallel to the iPad (see picture for what this means)
* there is a reference object in the same plane as the motion of the object (reference object is something you know actual size of; could be the moving object itself if object is large)
* the object’s motion fills a majority of the screen
* object is traveling “slow enough”

Basic Workflow:

1. Set up for taking video (see tips above)
2. Take video, do preliminary analysis using Vernier Video Physics app
   * directions at <https://www.youtube.com/watch?v=XLU2v1rgTAk> (~9 minutes long)
   * take and view video to make sure video is usable now (before doing the tracking). Things to check:
     + Does object stand out against the background?
     + Is object clear (not blurry)?
     + Does the action fill a large enough area of the screen?
   * set scale using length of reference object
   * choose origin and orientation of axes
   * track object (either manually or using autotracking)
   * examine data (make sure y-velocity is zero if you want object moving along x-axis)
   * readjust axes and/or origin if desired
   * make sure you have the data you want (before going to Graphical Analysis app)
   * save files (good choice=video with points and then data => open with Graphical Analysis)
3. Analyze data in Graphical Analysis app
   * directions at <https://www.youtube.com/watch?v=XWNBmJknYfs> (~9 minutes long)
   * tap-drag to select section of data. when you release the drag, you’ll get a menu with options
   * make sure you have the graphs and analysis you want (before saving data)
   * save files (good choice = picture)

Words of caution about iPads and passwords

If you use your email on the iPad, remember to ***delete your email settings from the iPad***. If you don’t, anyone who uses the iPad will be able to access your email! To delete your account settings from the iPad, open “Settings” app and choose “Mail, Contacts and Calendars.” Choose your account and delete it.

The same warning applies for any account you might log into (like iTunes, facebook or iCloud). The settings get saved on the iPad and remain until you delete them.

Video Physics App FAQ

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| --- | --- |
| How do I get the toolbar back? | Tap on the screen. You can also tap on the screen to make the toolbar go away. |
| How do I rename an experiment? | Tap “Experiments” at upper right of main screen to get the list of experiments. Tap on the information icon (a lower case i in a circle). Type in a new title. |
| How do I delete an experiment? | Tap “Experiments” at upper right of main screen to get the list of experiments. Swipe the experiment you want to delete to the left. Tap “delete” to confirm, or tap anywhere else to escape. |
| How do I use auto-tracking? | Instead of manually tapping each frame of the video to enter your data, the app can (sometimes) do this automatically. Move the cross hairs over a part of the object you want to follow and tap “track.” |

Graphical Analysis App FAQ

|  |  |
| --- | --- |
| How do I rename an experiment? | Tap “Experiments” at upper right of main screen to get the list of experiments. Tap on the title you want to change and type in a new title. |
| How do I choose which data to display? | Tap on the axis label display the menu. Tap your selection from the list. Tap on the menu icon again to make the menu disappear. |
| How can I add a title to the graph? | Tap on the “Settings” icon (looks like a gear wheel) and type in a title. |
| How can I see individual data points (rather than a line)? | Tap on “Settings” icon. Tap on “Appearance” and choose from the list. |
| How do I delete an experiment? | Tap “Experiments” at upper right of main screen to get the list of experiments. Tap “edit” (upper right corner). Tap on the experiment you want to delete and tap the garbage can icon (upper left). Tap on “Delete experiment” to confirm. |