Cell Phone Sensors

Download: Physics Toolbox Suite
   Android or iPhone

Reasons for Cell Phone Data Collection

- They already have it and know how to use it. Its free for you
- Don't have to check it out or keep track that it's put away properly.
- Its small, wireless, calibrated, charged,...
- Data is already in a .csv and can be easily emailed to the whole group

Pasco Sensor Bundle w/ 12 sensors

PASPORT Motion Sensor (PS-2103A)

PASPORT Force Sensor (PS-2104)

PASPORT Voltage-Current Sensor (PS-2115)

PASPORT Magnetic Field Sensor (PS-2112)

PASPORT Absolute Pressure/Temperature Sensor (PS-2146)

PASPORT Stainless Steel Temperature Probe (PS-2153)

PASPORT Light Sensor (PS-2106A)

PASPORT Sound Level Sensor (PS-2109)

PASPORT Charge Sensor (PS-2132)

Smart Gate (PS-2180)

Photogate Head (ME-9498A)

Time-of-Flight Accessory (ME-6810)

Items(s) Selected: Qty.

Physics Standard Sensor Bundle (PS-2931B)   1 $1180

Total: **$1,180**

Add Item(s) to Cart

Physics Toolbox Suite (17 sensors)

(1) G-Force Meter - ratio of Fn/Fg (x, y, z and/or total)

(2) Linear Accelerometer – acceleration (x, y, and/or z)

(3) Gyroscope - radial velocity (x, y, and/or z)

(4) Barometer - atmospheric pressure

(5) Roller Coaster - G-Force Meter, Linear Accelerometer, Gyroscope, and Barometer

(6) Hygrometer - relative humidity

(7) Thermometer - temperature

(8) Proximeter - periodic motion and timer (timer and pendulum modes)

(9) Ruler - distance between two points

(10) Magnetometer - magnetic field intensity (x, y, z and/or total)

(11) Compass - magnetic field direction and bubble level

(12) GPS - latitude, longitude, altitude, speed, direction, number of satellites

(13) Inclinometer - azimuth, roll, pitch

(14) Light Meter - light intensity

(15) Sound Meter - sound intensity

(16) Tone Detector - frequency and musical tone

(17) Oscilloscope - wave shape and relative amplitude

Lab Ideas

https://www.vieyrasoftware.net/browse-lessons

- How tall is an object? (trig)
- Acceleration (F=ma)
- Momentum (p=mv)
- Angular rotation (w, alpha)
- Pendulum
- Springs
- Light (malus law)
- Sound oscilloscope (open and closed pipes)

Design a lab and import data to excel