QUICK SHEET

VERNIER LabQuest 2

LOCATION of EQUIPMENT:
> Hardware: See lab attendant
> Software (built in): Analysis features
> > Applications
> > Tools and Resources

INSTRUCTIONS FOR USE:
1. Hold the power button on the side of the device near the LabQuest 2 logo until the screen flashes. Startup will take a few minutes
2. The first screen that you should see is the dashboard where you will be controlling all data collection
3. If you want to access one of the built in sensors (light, temp, microphone, gps, accelerometer) then press on the "sensors" > "sensor setup" and you will see a list of sensors.
4. If you are using an external sensor, then plug it into one of the channels and turn it on. The LabQuest should automatically detect the sensor, but if not go to "sensors">"sensor setup" and click on the channel you plugged the sensor into and find it in the list.
5. Next you want to set up the data collection feature. The mode of data collection will depend on the framework of your experiment and the type of sensor you are using, but there is a high likelihood you will use either "Time Based" or "Events with Entry."

   TIME BASED: The default mode for most sensors, readings are taken at regular time intervals.
   1. For "Time Based" modes you will set a "Rate" OR an "interval," and you will set the "duration" of your data collection, as well as your units. If you are collecting data for something with high variability, it may make more sense to have a higher rate of collection, and a shorter duration. Similarly, if you want to see trends over a long duration of time, you may want to record data less frequently.
   2. Press ok to queue your data collection and when you are ready, press the play button in the bottom left of the screen. The LabQuest will open the graph tab and show your data in real time.
   3. Once the data is done collecting you can email your data by pressing "File">"Email"

   EVENTS WITH ENTRY: Used when an experiment requires a different quantity than time. An example might be light readings in different locations, where light levels are a function of location and independent of time.
   1. When you go to setup this mode, make sure all the necessary sensors are turned on and giving you a reading. Any column that you add is a column that you will manually input information in addition to the sensors that are active. In the example of light levels in different locations, you may want to describe the location in shorthand rather than record GPS data. So you may create a column called "locations." Click ok when you are done and press the play button to view real time data being collected. If you are collecting data with a lot of variability you may want to select the "Average over 10 Seconds" feature.

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2. When you are ready to input a data point, you will press the "Keep" button on the bottom left of the screen. This will prompt you to manually input information for that column you added.
3. Save the data, and email it to yourself.

OVERVIEW:

Vernier LabQuest 2 is a standalone interface used to collect sensor data with its built-in graphing and analysis application. It can collect data at a rate of 100,000 samples/second. These units have built in sensors for light, temperature, sound and acceleration(x,y,z). The LabQuest can also have three other sensors plugged into the device, and the software acts as the interface. It has wireless connectivity, so all data collected can be sent to a personal email or downloaded into data analysis software such as Logger *Pro.* Vernier also offers a Graphical Analysis app for iOS, Android, or Chrome to stream data wirelessly to one or more mobile devices.

SUGGESTED APPLICATIONS:
- Site analysis
- Post occupancy
- Interior vs. exterior conditions

RELEVANT TOPICS:

Temperature, Design Development, Post Occupancy Studies