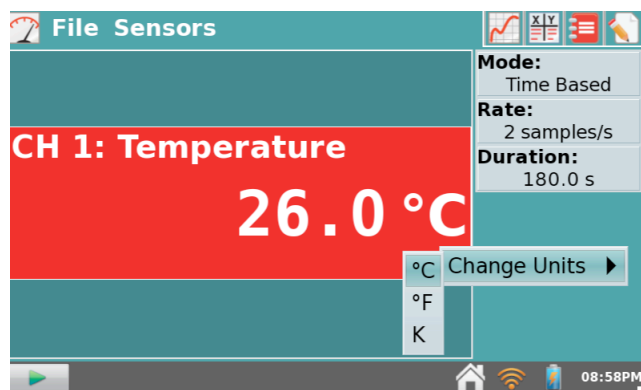
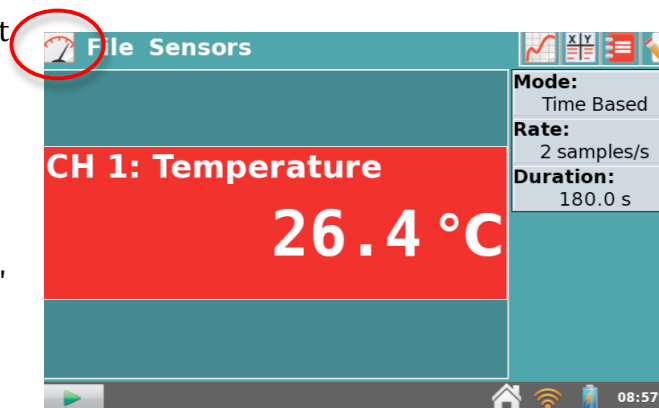


## LabQuest 2 Primer

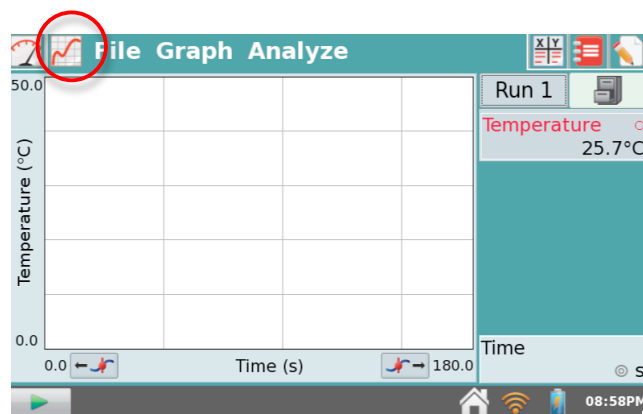
You can easily configure the LabQuest to conduct an experiment

When a probe is plugged into the LabQuest, it should Auto ID and open a window specific to that probe. The example to the right is one for a temperature probe. Notice the four icons along the top of the screen. The "meter" screen is the default that typically opens first. You can get back to this screen at any time by clicking the "meter" icon.



It is easy to change the units, by clicking on the red "meter". A pull down menu will appear to allow you to specify units. Some sensors will also have an option to zero the sensor.

If you click on the "graph" icon, a graph of the data will be displayed. This example is blank since no data has been collected yet.



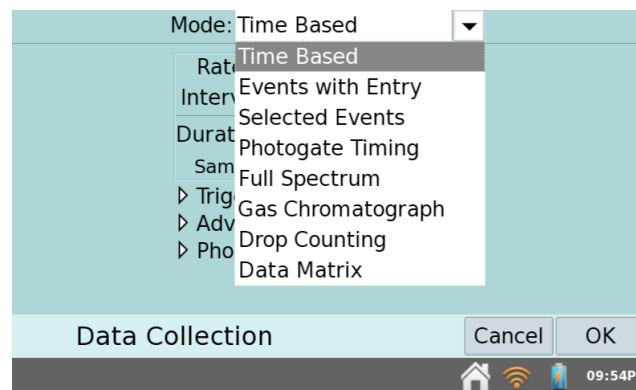
If you click on the "table" icon, a data table will be displayed. This example is blank since no data has been collected yet.



The Lab Instructions Viewer allows you to view lab instructions from Vernier lab books or even your own activities.

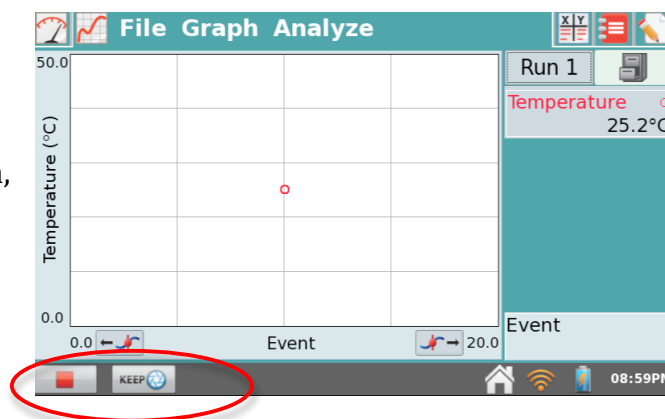
If you click on the "notepad" icon, you can type in notes.

The default setting will be a **Time Based** experiment, which means that the data will be collected over time. If you wish to change the time that the experiment will last, sampling rate or to change to a different mode, click on the table showing **Mode, Rate, Length** (be sure you are at the main “meter” screen). A new window will appear that will allow you to change mode or to modify the experiment parameters. You can change the rate at which data is collected as well as the duration (length) of the experiment.. It will automatically stop at the end of that time (or you can manually stop it at any time). You can also change the time unit (seconds, minutes, hours etc.).



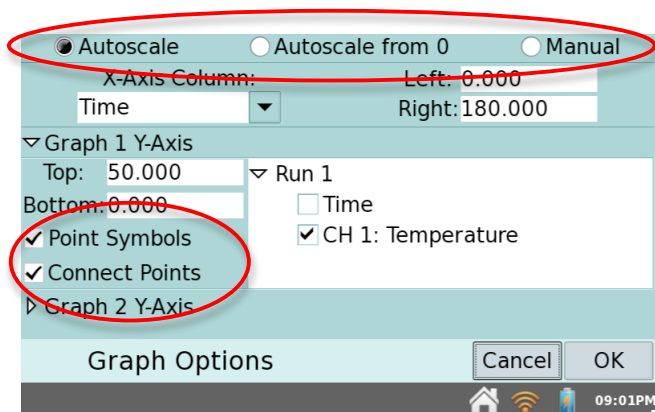
There are times that you will not want to collect data over time. The **Events with Entry** mode is another popular way to gather data. In this mode, the probe will collect a data point when you tell it to and then you will be prompted for an “entry” which will be plotted on the X axis. An example of this would be Boyle’s Law, where the pressure sensor would measure pressure and you would be prompted to enter the volume. At the “meter” screen, click on the table showing **Mode, Rate, Length** and select **Events with Entry** from the pull down menu. You will be asked for the name of the Event and Units. Any time you need to input words or numbers, a keyboard automatically appears.

When you select the **Events with Entry** mode, a new icon appears directly to the right of the green Start button (this is on the “graph” screen). Once you start collecting data, the green Start button will turn into a red Stop button. When you click this **Keep** button, it will collect a sensor reading and then prompt you for an entry. Then you can proceed to the next data point. Be sure and click the red stop button after you have finished collecting all your data points.



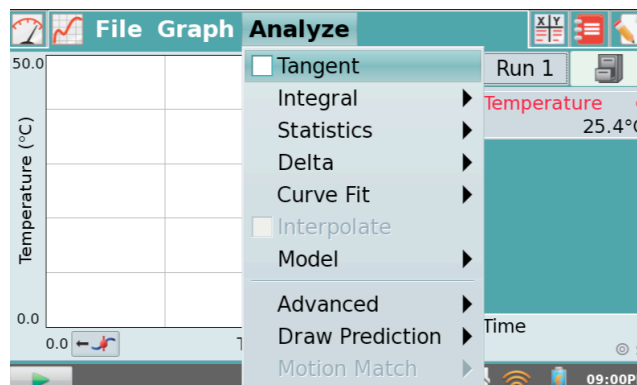
If you go to the **Graph** pull down menu (from the “graph” screen) and select **Graph Options**, a dialog box appears. This allows you to customize the way the graph appears.

It is often desirable to see only the data points. A scatterplot can be obtained by deselecting **Connect Points** and then selecting **Point Protectors**.



You can also adjust scaling of the graph from this screen. The default setting is **Autoscale**, but you can also apply a **Manual** scale to the graph and **Autoscale from 0**. Scaling can be applied to each axis separately.

The **Analyze** menu from the graph screen has several useful tools. **Draw Prediction** allows you sketch a prediction prior to collecting data. **Statistics**, **Curve Fit** and **Model** are powerful tools for mathematical analysis of data.



There are also some icons along the bottom of the main screen. Experiment with them to find out what they do. Also experiment with the pull down menus at the top of each screen.

LabQuest Viewer computer software utilizes the wifi capabilities of the LQ2. The teacher can wirelessly project the screen of their LQ2 as well as log into student devices to showcase class data.

Logger Pro software for computers can also interact with the LabQuest. Logger Pro will automatically detect that a LabQuest has been connected to the computer and will ask if you want to retrieve the data.