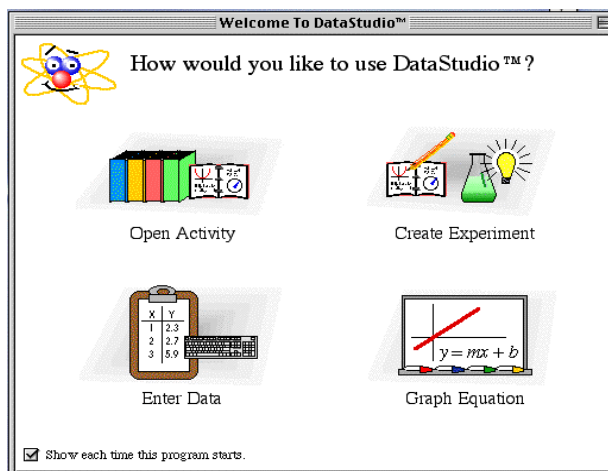


## Overview and Setup of Pasco Data Collection Tools

So far you have been using the ChemSense software to create and share notes, drawings, and animations. There is also another piece of software that you will be using that lets you collect, display, and analyze measurement data quickly and simply. For instance, if you were interested in measuring how fast a beaker of water reaches 50°C, you could plug in a temperature probe and collect temperature data as you heat the beaker of water. This data can automatically be graphed for you, and you can export the graph into ChemSense. We call these data collection tools “Pasco”.

Near your computer is a little black box that has several ports, or plug ins, in it. This box is called the “interface” box. Into this box you will plug in the various probes – pH, temperature, dissolved oxygen, pressure – and it will communicate the data you collect to the computer. To start using Pasco, just follow the following steps:

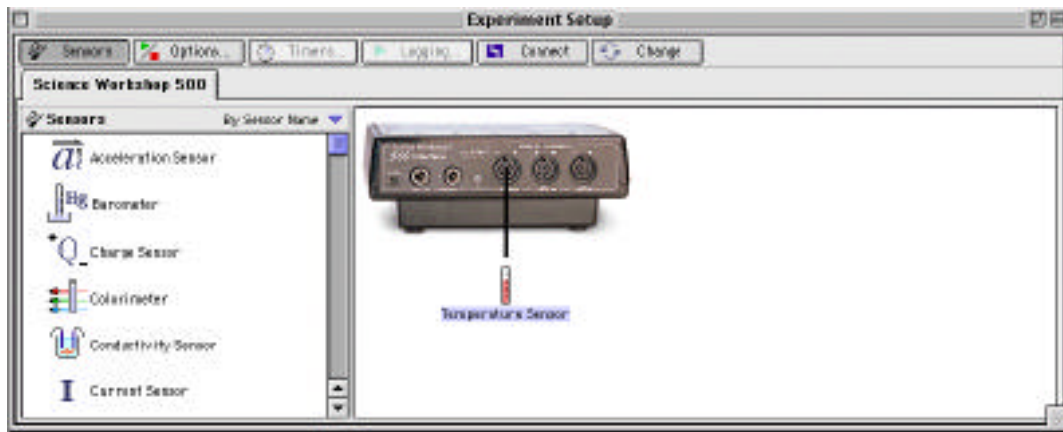
1. Check to make sure the little green light on the front of the interface box is on. If not, check to see if the switch on the back side of the box is in the “on” position.
2. Plug in the probe you are interested in using into the front of the interface box in port A, B, or C (it doesn't matter which one).
3. Double-click on the “Data Studio” icon on the computer's desktop. This will open up a window that looks like this:



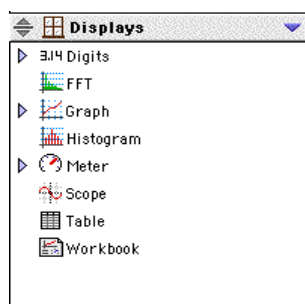
4. Choose “Create Experiment”. The software will then start “looking” for the interface box. Once it finds it, you need to tell the software what type of probe (or probes) you plugged into the box. At this point, you should see a screen that looks like this:



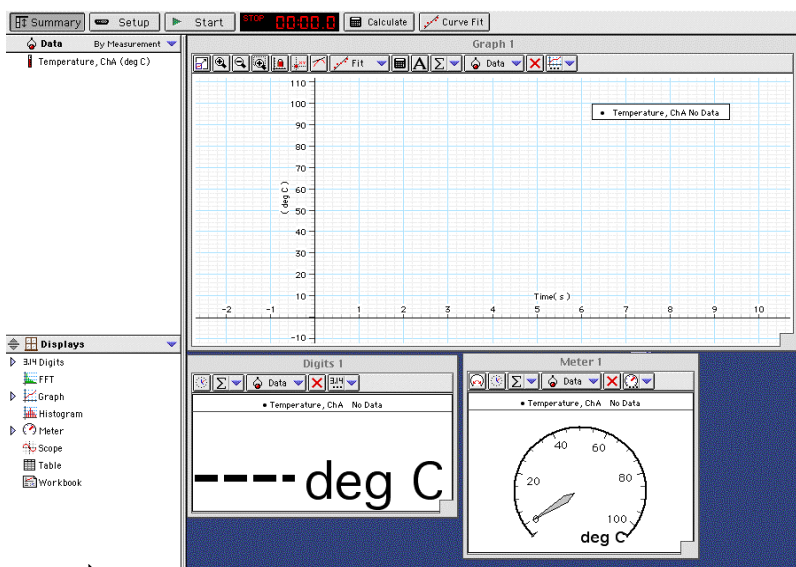
5. Scroll down the list of probes until you find the one that you are using. Once you find it, click and drag it over to the port (A, B, or C) you have it plugged into. The picture of the interface box should now show you that the probe is connected in that port. As an example, here's what it looks like with the temperature sensor connected in port “A”:



6. Once you have told the interface which probe/port you are using, you can close the “Experiment Setup” window.
7. As a final step, you need to tell the software how you would like your data displayed – as a graph or just as readout. Look at the list on the left side of the window that looks like this:



8. Double click on the display you would like to see. You can choose more than one if you want. In this example the “graph”, “digits”, and “meter” were all chosen.



Now you are ready to start collecting data. To do so, click on the “Start” button on the top of the window. When you are finished, click on it again (it should say “Stop”). If you choose start again, it will start a second data collection and will show up as a different colored graph line.

Once you’ve finished a few data collections, feel free to experiment with the tools at the top of the window (zoom in, zoom out, slope tool, etc.) Also, you may want to save your data once you are finished – choose file/save, give it an appropriate name, and save it into your groups ChemSense folder on the desktop...