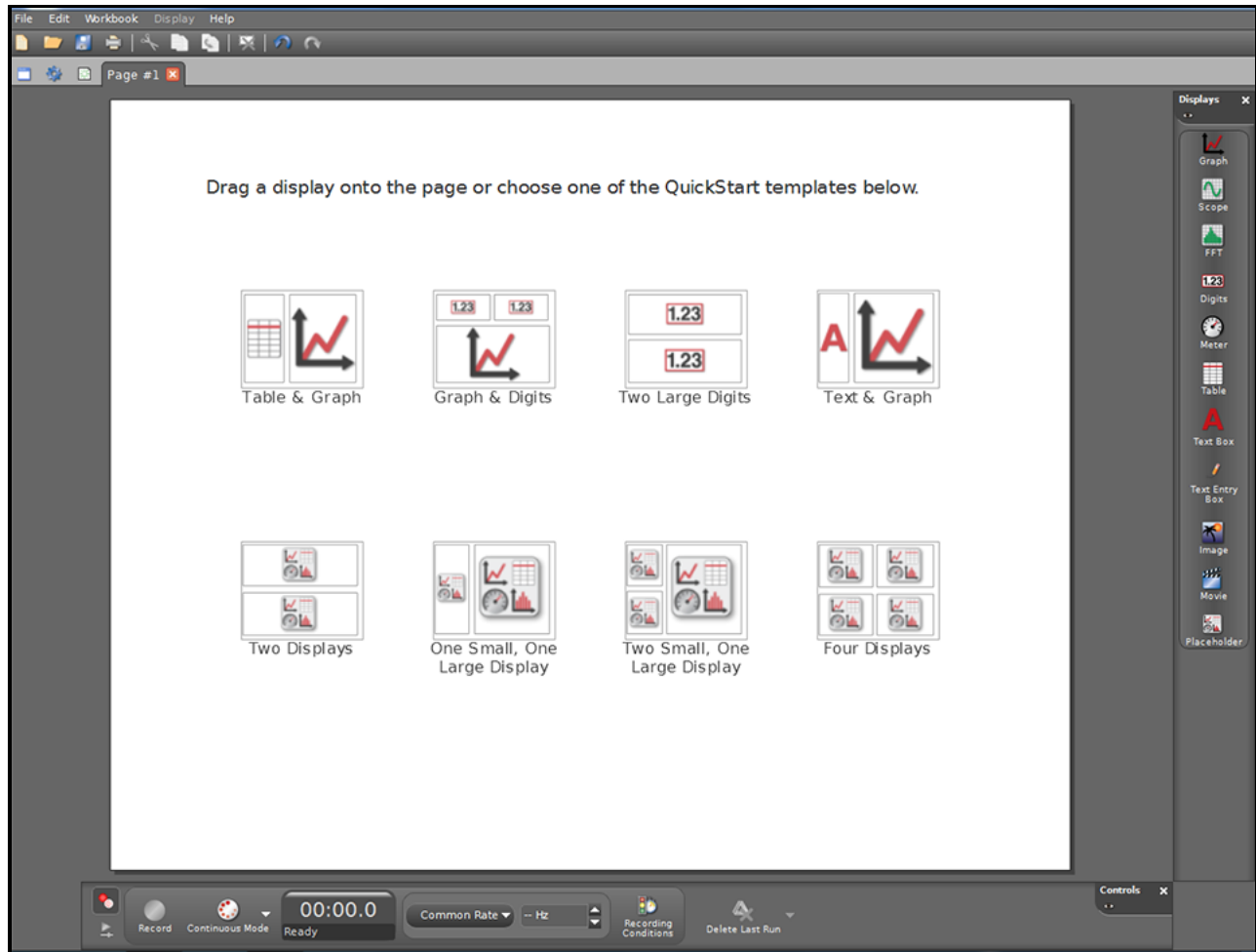# Using the Pasco Capstone Data Interface
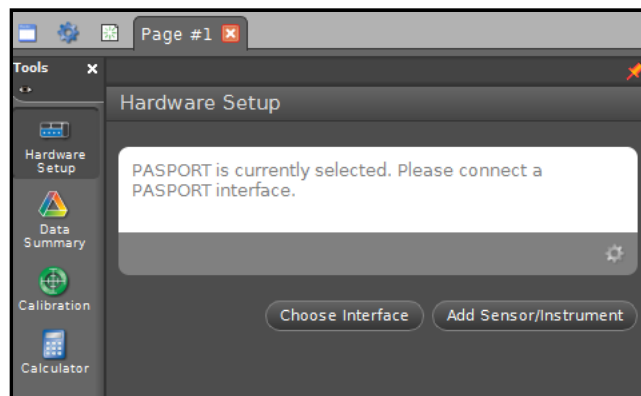
Introduction: This semester many of your experiments will incorporate electronic data acquisition, and this lab uses the Pasco Capstone data interface. Rather than cite usage directions in every experiment, general instruction is offered here.

Welcome Screen:

If you know the display you want right off the bat you can choose it here; otherwise displays can be called up later.
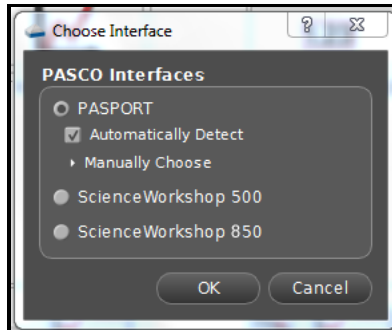
Choose your hardware:
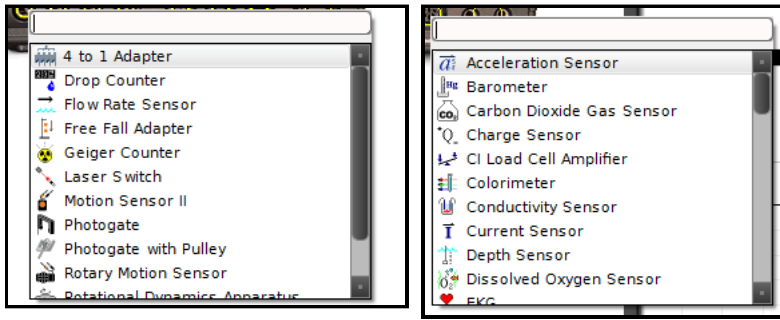

Here you'll choose the 850:

in this dialog:

It may offer Universal Interface 850, depending on the software version.
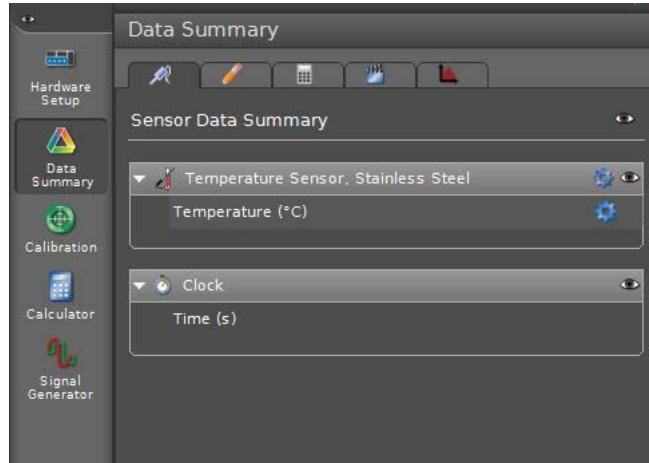
Sensors: You will need to choose one or more sensors which can be connected to a variety of ports:
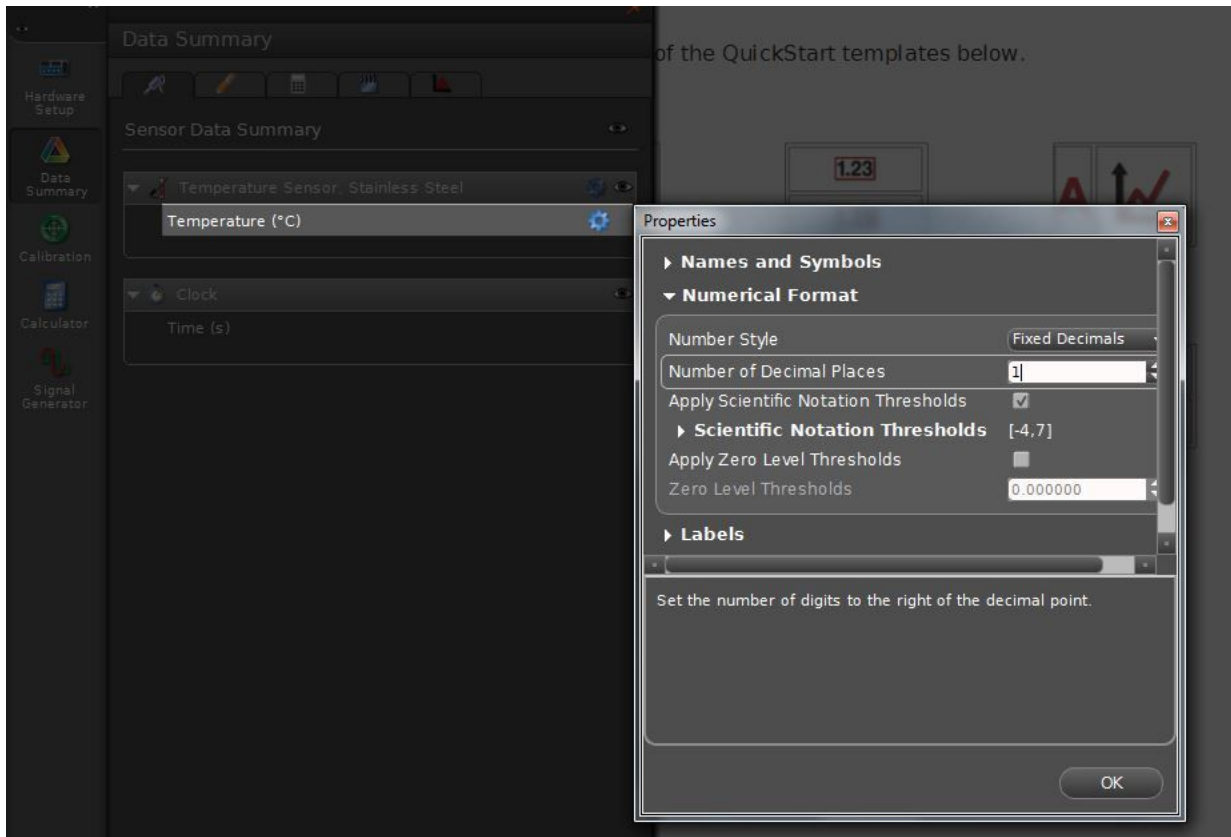

the sensor options differ according to port:

You'll need to increase the precision for the sensors, the number of digits displayed and recorded. Open up data summary:

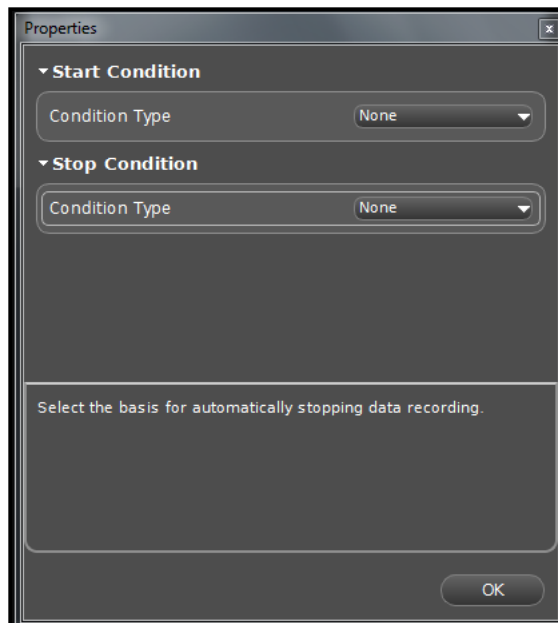and right-click on the little blue properties gear:

"Zero Level Thresholds" means the smallest number displayed and recorded.

A note about the temperature probe: initially the probe is at room temperature, so if you insert in into something colder, there will be a series of readings trending downwards as the probe cools to the sample temperature. Be sure to use the lowest recorded temperature as $T_{initial}$ when necessary; likewise when measuring the temperature of a hot sample; $T_{initial}$ would be the maximum on this curve. Also, in most temperature labs there is no need to take 10 readings per second; once every ten seconds will still yield good results if a run is to last half an hour or more (see below).

A couple of tool bars allow you to manage the displays and control the experiment:

The control in the red circle above is important: it allows you to set how often the interface samples the sensor. (More on that in other labs).The experiment is started with the record button, but start and stop conditions can be applied:

and if you haven't already set the display you can choose from a variety of screens; here are some more common ones:

and the sub displays can be scaled.

Finally, for those who like videos:

PASCO Capstone Software Introduction