Experimental Design Template: Quantitative

Quantities, Equations & Measurements

Desired Quantity	**Equation**	**Description/Explanation** *(where equation comes from)*	**Known Quantities**	**Measured Quantities**	**Quantities to be Calculated** *(Still Needed)*
	*				

* *This equation should be linearized, with the quantity or its inverse as the slope.*

Known (Unmeasured) Quantities

- **Constants:** (*to be looked up*)

- **Unmeasured Control Variables:** (*determined by the experimental set-up*)

Measured Quantities

- **Measured Control Variables:** (*kept constant, but need to be measured*)

Variable	**How Measured**

- **Manipulated (Independent) Variables:** (*can be measured without <u>actions</u> occurring*)

Variable	**How Measured**

- **Responding (Dependent) Variables:** (*require action(s) to be measured*)

Variable	How Measured	Action(s) Required

Flow Chart

The timeline is shown in the center. List actions on one side and measurements and/or observations on the other, in chronological order. Use lines or arrows to connect each to its place on the timeline. Place a dot on the timeline to indicate when an action and a measurement or observation must take place at the same time.

(Hint: If you're using a computer to fill out this form, use a text box *for each action or measurement and use Insert → Shapes to add connecting lines and dots.)*

Actions **Timeline** **Measurements/Observations**

start

finish