### Quantities, Equations & Measurements

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| --- | --- | --- | --- | --- | --- |
| **Desired Quantity** | **Equation** | **Description/Explanation** *(where equation comes from)* | **Known Quantities** | **Measured Quantities** | **Quantities to be Calculated** *(Still Needed)* |
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### Action(s) Needed to Produce Outcome

*What needs to happen in order to meet the objective?*

### What will cause the action(s) to happen?

*Are there specific conditions necessary for the action to occur? If so, how will they be met?*

### Known Quantities

### *(Known before experiment without having to be measured*.)

* **Constants** (*to be looked up*):
* **Unmeasured Control Variables** (*determined by the experimental set-up*):

### Measured Quantities *Indicate how each will be measured*.

* **Measured Control Variables** (*kept constant, but need to be measured*):
* **Manipulated (Independent) Variables** (*can be measured before the action occurs*):
* **Responding (Dependent) Variables** (*cannot be measured until the action occurs*):

### 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 arrows to connect each to its place in the timeline. Place a dot on the timeline to indicate when an action and a measurement must take place at the same time.*

|  |  |  |
| --- | --- | --- |
| **Actions** | **Timeline** | **Measurements/Observations** |
|  | *start* |  |
|  | *finish* |  |

### Labeled Sketch or Photograph of Experimental Set-Up

*Include a sketch or photograph of your experimental set-up, with* ***each*** *piece of equipment and important dimensions* ***labeled****.*