Table and Graph Checklists

**Table Checklist**

**Title**

Every table must have a title.

**\_\_\_\_\_\_** Does the title briefly describe or name the *dependent variable*, the variable you measured?

\_\_\_\_\_\_ Is the title centered over the table?

**Rows and Columns**

* If the columns are showing your *independent variable,* the variable you changed, then the rows should show the *trials*, each test you performed. **You must perform at least five (5) trials.**
* If the rows are showing your independent variable, then the columns should show the trials.
* If you measured your dependent variable multiple times over the course of the experiment, you need to include *time* as well. It may be best to create a separate table for each value of the independent variable (for example, each type of liquid used in a test of how different liquids affect plants), depending on how many times you measured.
* *Calculated results* (for example, averages) may be shown in a clearly labeled separate section of the table showing the data, or they may be shown in their own table.

\_\_\_\_\_\_ Does every column have a heading?

\_\_\_\_\_\_ Does every row have a heading?

\_\_\_\_\_\_ Are the units of measurement included for any numeric values?

\_\_\_\_\_\_ Does the table use the same font and font size as the report text?

\_\_\_\_\_\_ If there are multiple tables, do they have a similar layout?

\_\_\_\_\_\_ Are calculated results clearly labeled and placed separately from raw data?

*Example:* Investigative question: How will different amounts of light affect the growth of plants? The independent variable is the amount of light. The dependent variable is the growth of the plant. Note that you could also make separate tables for the three values of the independent variable: complete darkness, indirect sunlight, and direct sunlight. Plant1 – Plant 5 are the five trials that are required. (Example uses smaller font.)

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| **Plant Heights (cm) in Different Lights**   |  |  |  |  |  |  | | --- | --- | --- | --- | --- | --- | | **Light Conditions / Day** | **Plant 1** | **Plant 2** | **Plant 3** | **Plant 4** | **Plant 5** | | **Complete Darkness** |  |  |  |  |  | | Day 0 |  |  |  |  |  | | Day 5 |  |  |  |  |  | | Day 10 |  |  |  |  |  | | **Indirect Sunlight** |  |  |  |  |  | | Day 0 |  |  |  |  |  | | Day 5 |  |  |  |  |  | | Day 10 |  |  |  |  |  | | **Direct Sunlight** |  |  |  |  |  | | Day 0 |  |  |  |  |  | | Day 5 |  |  |  |  |  | | Day 10 |  |  |  |  |  | | **Average Total Plant Growth (cm) at Day 10**   |  |  |  |  | | --- | --- | --- | --- | |  | Complete Darkness | Indirect Sunlight | Direct  **Sunlight** | | **Average height (cm)** |  |  |  | |

**Graph Checklist**

The purpose of graphs in your report is to help readers see patterns and trends in your data. Consider how many graphs you need, and be sure each graph clearly shows its data. Too much data makes a graph hard to read, so it may be better to create separate graphs for each value of the independent variable (in the example above, the different amounts of light.) You do not necessarily need to show a graph (or graphs) of your raw data, especially if there is a lot of it. It may be appropriate to graph only the calculated results (averages) so that a reader can see the trends.

**Title**

Every graph must have a title.

**\_\_\_\_\_\_** Does the title briefly describe or name the *dependent variable*, the variable you measured?

\_\_\_\_\_\_ Is the title centered over the graph?

**Graph Type**

* If you measured over time, you should present your data in a *line graph* with time on the horizontal (X) axis
* If you measured each trial only one time, you should present your data in a *bar graph*.
* *Pie charts* (circle graphs) are only appropriate if you are reporting parts of a whole. For example, the percentage of shots made using a particular technique. (Note that when graphing a comparison of the results for each type of shot, you should use a bar graph.)
* *Calculated results* (for example, averages) should always be reported in a **separate graph.**
* Graphs **do not** have to be in color, but make sure that your graphing software is set to print in black and white.

**Graph Components**

**\_\_\_\_\_** Does the graph include all the data that it should, and omit data it should not?

**\_\_\_\_\_** Is each data series labeled appropriately?

\_\_\_\_\_ Is each axis labeled appropriately?

\_\_\_\_\_ Are the units included for each axis?

\_\_\_\_\_ If there is a legend, is it clear?

*Examples*

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