Making Data Tables

* Data tables are used to organize data/information.
* **Variables** = Measurements or characteristics that can change (vary); factors that can affect something else.

There are 2 types of variables:

* + **Independent Variable**: Data that can be controlled in an experiment. It is chosen by the experimenter **before** an experiment (or data collection) begins.
  + **Dependent Variable**: Data that needs to be measured or gathered **during** an experiment.
  + **Example** – Measuring a child’s growth each year over 5 years.
    - *Independent Variable* = years
    - *Dependent Variable* **=** height
    - Height **depends** on years

Setting up a Data Table

* + **Title** – Tells what the information in the table is. Examples:
    - *Independent Variable* **vs.** *Dependent Variable*
    - Use the Question/Purpose for the experiment
  + **Columns** – one for the Independent Variable, the rest for Dependent Variables
  + **Headings** at the tops of all columns – with **measurement units**
  + **Data** – after the experiment
  + ***Use a ruler and be neat***

**Example #1:**

Title **Otis’ Age vs. Height**

|  |  |
| --- | --- |
| Age (years) | Height (feet) |
| 0 |  |
| 1 |  |
| 2 |  |
| 3 |  |
| 4 |  |
| 5 |  |

Headings

Independent Variable Dependent Variable

on LEFT on RIGHT

**Example #2** (with multiple trials and average)**:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Type of Car** | **Distance**  **Traveled**  **Trial 1** | **Distance**  **Traveled**  **Trial 2** | **Distance**  **Traveled**  **Trial 3** | **Average**  **Distance**  **Traveled** |
| **Car A** | 100 cm | 80 cm | 103 cm | 94.3 cm |
| **Car B** | 50 cm | 36 cm | 75 cm | 53.7 cm |
| **Car C** | 25 cm | 40 cm | 50 cm | 38.3 cm |

Title ***Which toy car rolls farthest?***

All

Dependent

Variable

Trials

on RIGHT

Headings

Independent

Variable

on LEFT