Basic Stat Vocabulary

Define the following terms, in your own words:

1. Population
   All members of a defined group.

2. Sample
   A subset of the population.

3. Random Sample
   A subset of the population where members must have:
   1) An equal opportunity to be selected and
   2) The same characteristics of the population.

4. Mean (μ)
   The arithmetic average; sum of the data values divided by the total number of data values.

5. Variance (σ²)
   The arithmetic mean of the squared differences between each data value and the mean; Combines all of the values in a data set to produce a measure of spread.

6. Standard Deviation (σ)
   The square root of variance; the measure of spread of a distribution with the same units as the data.

Example

The Normal Curve

There is no one normal curve; it will vary depending on the spread of the data, or standard deviation.

Properties of the Normal Curve

- The curve is bell-shaped.
- It is symmetrical about the mean.
- The mean, median, and mode are the same.
- The area under the curve represents 100% of the data.
- The Empirical Rule states 68% of the data lies within one, 95% within two, and 99.7% within three standard deviations from the mean.