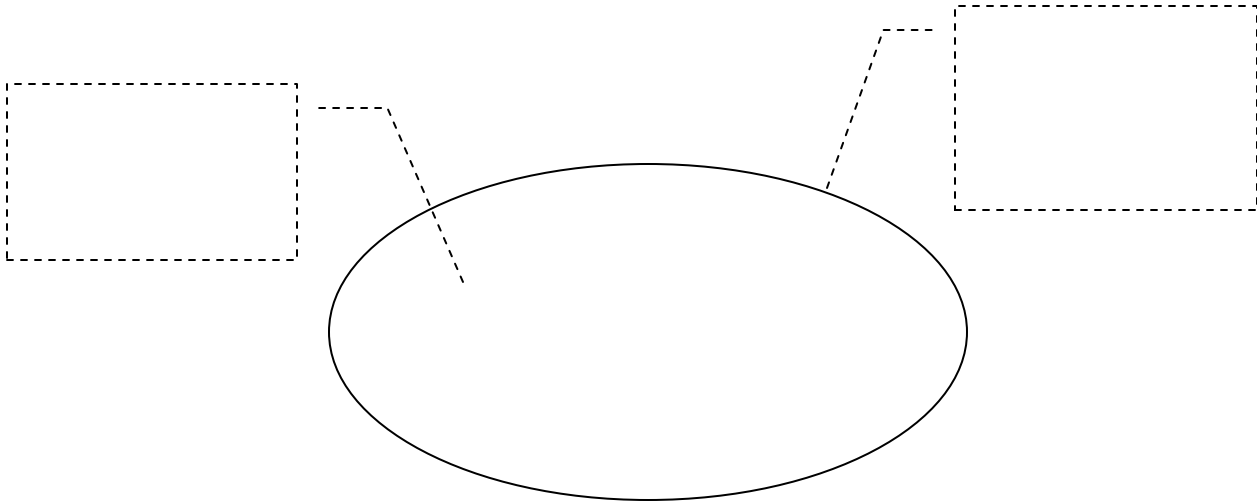


Sampling Techniques & Representing Data Graphically

In order to find out **information about a population** we must take a **representative sample** of the population and **analyze it**.



Sample:

Sampling Methods:

Estimating Information (Extrapolating Information):

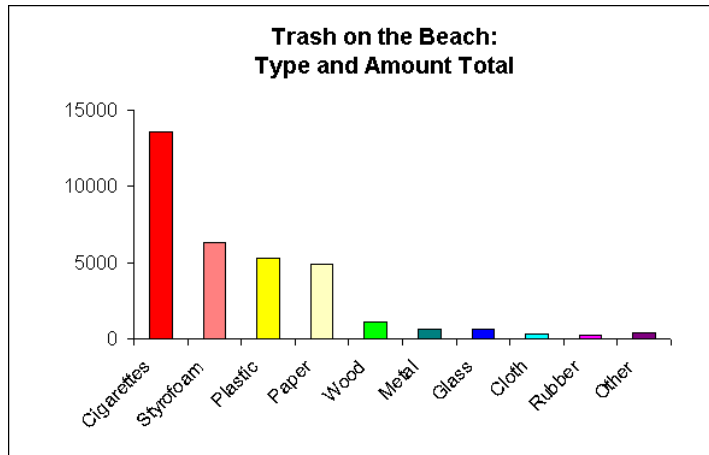
Sampling Options: There are two options that can be chosen when starting to analyze a population; it is important to recognize the differences.

Population Size	Sample Size	Accuracy of Results
Small Population Size		
Large Population Size		

Representing Data Graphically (1 Variable – only one attribute)

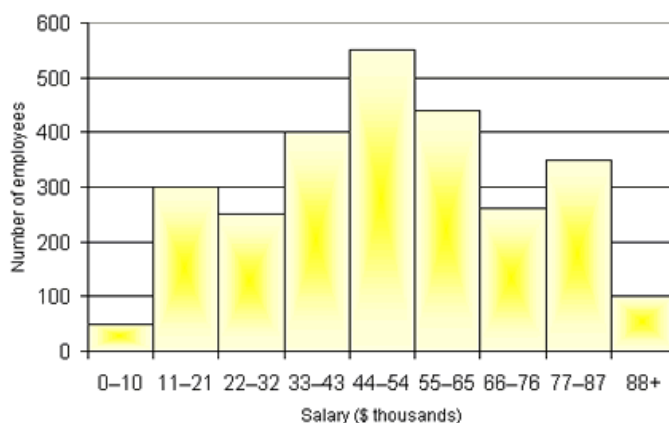
After collecting data it is vitally important that you communicate and display your data in a meaningful way. This is most often done with graphs. Graphs give a quick visual overview of the information that has been collected. By looking at just raw numbers it is hard to notice clear patterns, trends or interesting information. By graphing and analyzing the data interesting results can be found more quickly and accurately.

Bar Graphs:



For example: in this bar graph you can see that the bars represent the number of items of each type of trash that were found. This is an example of **discrete data** because it is in a **type/group/category** format.

Histograms:



For example: in this bar graph you can see that there is a range of salaries. This is continuous data because it has a range of values and is not a specific group or category. As a result we have to group the salaries into **intervals** or **bins**. These bin sizes are flexible and must be chosen wisely.