Sampling and Comparing Distributions

Dear Student & Parent/Guardian,

In sixth grade students were introduced to statistics with single data distributions. This unit will build on their understanding of graphs, mean, median, and mean absolute deviation in comparing two data distributions in order to draw inferences about a population. Foundational knowledge will also be learned about random sampling. Students will explore these topics by comparing right and left hand throwing speeds amongst their classmates. Students will create their own statistical question and design and analyze a survey to generate a valid predication about a general population.
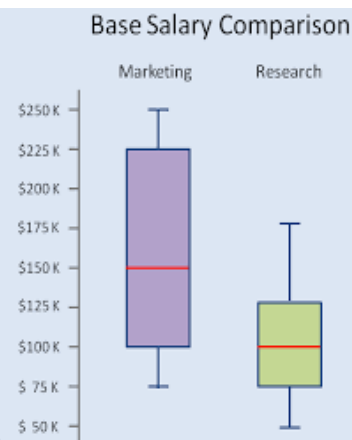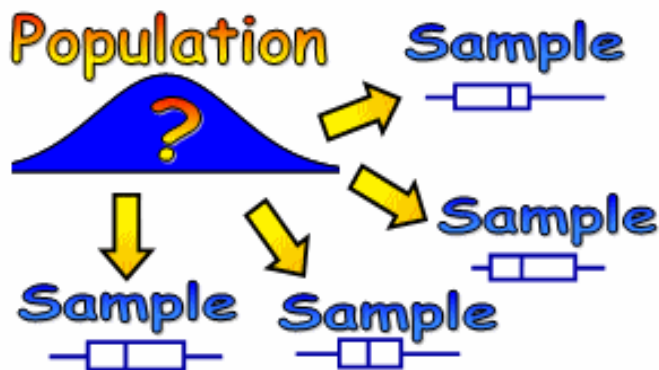
-AUHSD Math Teachers

Why are we studying this?

In the world around us, and by looking at trends, samples, and what happened in the past, we can predict what may happen in the future. Areas of statistical study include:

- Weather Forecasts
- Predicting Disease
- Medical Studies
- Genetics
- Politics
- Consumer Goods
- Stock Market

Base Salary Comparison

Sample Question
What does the interquartile range tell us about the base salary in a career in marketing compared to a base salary in research.

Real-World Application
Wal-Mart, a worldwide leading retailer, keeps track of everything they sell and uses statistics to determine what to ship to each store and when. Analyzing their vast store of information, for example, Wal-Mart decided that people buy strawberry Pop-Tarts when a hurricane is predicted in Florida! (Math Worksheet Center)

A Note About Homework

Homework in this unit will contain a spiral review of topics previously learned in Math 1 as well as topics concurrent with the unit of instruction. Topics include:

- Constructing Box Plots, Histograms and Frequency Tables
- Finding Measures of Center and Measures of Variability
- Percent and Proportional Reasoning

Essential Questions Addressed in this Unit

- How can sampling help us to make generalizations and inferences about a population?
- How can measures of center and variability help me to compare two populations?