

NPSD Middle & High School Curriculum

Department: Mathematics

Course: Statistics

Promise Standards

- Students will be able to describe and interpret univariate data to be able to compare and reach conclusions and defend these conclusions.
- Students will be able to describe and interpret associations involving bivariate data, especially data that has a linear relationship and will be able to make predictions and determine the usefulness of linear associations
- Students will be able to model real world scenarios and find probabilities (including conditional probabilities) using simulations and various models. They will be able to use these probabilities to determine association or independence.
- Students will be able to design observational studies and experiments noting the differences between the two and their key components.
- Students will be able to work with normal and uniform probability distributions to estimate probabilities of real word situations
- Students will probabilities, expected values, and standard deviation of various real world situations that can be modeled by a discrete random variable.
- Students will understand the properties of sampling distributions and the conditions needed to meet the desired properties for a distribution of sample proportions.
- Students will be able to reach conclusions about data and multiple sets of data using confidence intervals and hypothesis tests understanding the conditions that must be met to validly perform these tests.