Southmoreland School District
AP Statistics Curriculum Overview

AP Statistics Overview:

The AP Statistics course introduces students to the major concepts and tools for collecting, analyzing, and drawing conclusions from data. There are four themes evident in the content, skills, and assessment in the AP Statistics course: exploring data, sampling and experimentation, probability and simulation, and statistical inference. Students use technology, investigations, problem solving, and writing as they build conceptual understanding.

Module Titles:

Module 1: Selecting Statistical Methods
Module 2: Data Analysis
Module 3: Using Probability and Simulation
Module 4: Statistical Argumentation

Module Overviews:

Module 1:
The students will identify the question to be answered or problem to be solved, choose an appropriate method to gather the data and present it. They will identify any relevant information to help answer the question, and choose the appropriate method for inference based on what's being asked. They will identify the null and alternative hypotheses for significance tests, or come up with the confidence interval to answer the question.

Module 2:
The students will describe data presented numerically or graphically, and represent data with the appropriate graphs. They will calculate summary statistics, relative positions of points within a distribution, correlation, and predicted responses. They will also compare information from multiple distributions.

Module 3:

The students will determine relative frequencies, proportions, or probabilities using simulation or calculations. They will determine parameters for probability distributions and describe them. They will either construct a confidence interval or calculate a test statistic and find a p-value provided conditions for inference are met.

Module 4:

The students will verify that inference procedures apply in a given situation, Interpret statistical calculations and findings to assign meaning or assess a claim, and make an appropriate claim or draw an appropriate conclusion. They will also justify a claim based on either a confidence interval or significance test.