AP Statistics for Beginning Teachers

Word for the Week: Variability

Syllabus—Summer, 2016

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Calculators (TI-84, TI-Nspire) will be used throughout the Institute. In addition, we will explore how computers can enhance learning in an AP Statistics course.

All the topics listed below will come up during the week, but not all topics will receive the same level of attention. We will choose the speed and depth of exploration of each topic based on the experience and comfort level of the group. However, simulation will play an important role throughout the week. Some of that simulation will be "high-tech" and some will be decidedly "low-tech" but all will be purposeful.

Note that during our sessions we will sometimes be playing the role of student, working through activities and problems we might use in class. At other times we will share our insights as teachers.

Monday, June 27:

Introductions and overview of the week
Resources for teaching AP Statistics
The AP Audit
Opening Problem: an introduction to statistical thinking
Simulation—as Content and as Tool
Univariate Data Analysis—the foundation for inference
FRAPPY: using AP problems
Homework

Tuesday, June 28:

Discussion of homework
Bivariate Data Analysis
FRAPPY: using AP problems
Design of Experiments: Randomness and Scope of Inference I
Homework

Wednesday, June 29:

Discussion of homework
Sampling: Randomness and Scope of Inference II
Probability
Random Variables
Special Random Variables: Normal, Binomial, and Geometric
FRAPPY: using AP problems
Homework

Thursday, June 30:

Discussion of homework
One-Sample Inference: Chi-Square Goodness of Fit; Sampling Distributions
One-Sample Inference: Proportions and Means
Types of Errors: Power
Two-Sample Inference: Proportions and Means
Two-Sample Inference: Chi-Square Homogeneity
Bivariate Inference: Chi-Square Independence
Homework

Friday, July 1:

Discussion of homework
Bivariate Inference: Regression
Scoring AP exams/simulated reading
Evaluations