

1106-A5-26

Rob Eby* (jeby@blinn.edu). *Using simulations, data pulled from websites, and student data sharing to enhance understanding of the Central Limit Theorem and to better understand what is meant by a confidence interval.*

Often in an introductory statistics class students view statistics as a collection of magic procedures. In keeping with the GAISE guidelines from the American Statistical Society one important topic for students to understand is the idea of a sampling distribution. However, students are often skeptical when a data set is presented in class they think it is rigged. In the presenter's class, students are given a multi-stage assignment. The first stage is to find a website that is "full of numbers." The numbers from some of the web pages are stripped and each is taken as a population. Then each student draws some samples of two different sizes from the population and computes sample data. The sets of sample data are then analyzed to produce a sampling distribution to help students gain an understanding of how the Central Limit Theorem works. Early in the class the Empirical Rule is covered and it is stressed that 95% of your data is within two standard deviations. This is the foundation to look for patterns and then back solve for the formulas from the Central Limit Theorem. The exercise is repeated for confidence intervals. A similar set of activities is used for proportions. A website with the activities will be provided at the end. (Received April 29, 2014)