1125-K5-2809   **Bob Guest*** (`guest00@utk.edu`). *Portable Populations for Collecting Real Time Data Sets in the Classroom.* Preliminary report.

In my introductory statistics course students collect and analyze data from portable populations of 1,000 Scrabble tiles, multiple customized decks of Uno cards, standard dice and used dice from the craps tables of the Stratosphere casino. These populations allow for a variety of active learning experiences working with quantitative and categorical data. In some instances students are told the distribution of the population. With this information they calculate population parameters and investigate both probability and the impact of transformations of random variables on the population mean, standard deviation and distribution. Students also collect samples of different sizes and use their statistics to discover the nature of sampling distributions. Knowing the entire population allows students to see the connection sample statistics have to the parameters they are going to estimate or test. Altogether this enhances their understanding of the Central Limit Theorem and lays the foundation for the techniques they will use to estimate and test population parameters, including comparisons of two populations as well as Chi-squared goodness of fit tests and tests of independence. (Received September 20, 2016)