

### Recommendation 1: Use Real Data

---

This article summarizes a classroom activity involving estimating the length of two pieces of string. The students were shown the strings and were asked to estimate the length visually. The two pieces were never held out separately so that the students could not compare the lengths. The students first wrote down their estimates for the length of string one. After estimating the length of string one, the students were shown string two and were told that its length was at least 35 inches long. The students wrote down their estimates for the length of the second string and all of the estimates were compiled and analyzed. This activity was conducted with 622 students in 4 different classes. The estimates from all 4 classes were analyzed together. The classes used histograms and box plots to analyze the data.

This activity follows the recommendation of the GAISE report because all the data used was estimates from the students in the classes. The fact that the students' predictions made up the data set made the discussion and analysis more interesting to the students. The students could compare their own estimates to those of the rest of the class and could determine the accuracy of their estimate. Additionally, if the teacher had just given the students the data, the class may believe the teacher skewed the data. The students may think the teacher developed the data set to demonstrate a specific point and that it was not accurate. Some of the points that were outliers, like the estimate from the student who was more familiar with the metric system, may not have been believable to the students. Using the real data made the discussion and analysis more meaningful and interesting for the students.