



PROJECT-SET

Statistics Education for Teachers

Sampling Variability Culminating Activity

The goal of this project is for each person to pose their own question, set up their own data collection, analyze the results, and then interpret the results to answer their question. The idea is that each person will carry out a statistical investigation from start to finish. To do this, follow the guidelines below.

1. Set up a statistical question to explore some feature about a population that interests you. Be sure to describe the population of interest, the parameter you are interested in gaining information about, and think through how you will go about collecting data to answer your question. Explain ALL pieces of your thought processes.
2. Take one single sample from the population of interest and collect information on the feature you would like to gain information about.
3. For the sample, find the value of the sample statistic.
4. Use what you know about the shape of the sampling distribution of the statistic in order to make inferences about the population parameter.
5. Discuss the strength of the evidence to answer your question.
6. Why are you able to make inference about the population when you have only sampled one sample? Explain.
7. How certain are you of your inferential statements? Explain.

Note: If you find it easier to think out loud instead of writing out your answers for the explanations above, you may record yourself explaining certain portions of your thought process.