





# Why Random Sampling?

## Student Activity

Name \_\_\_\_\_

Class \_\_\_\_\_

- d. Select **50 Repetitions** until you have a distribution of 500 sample mean lengths. How does the distribution change?
- 
3. Reset and generate another distribution of sample mean lengths. How does this distribution of sample means compare to the distribution from 2d?



### Activity 2 [Page 3.4]

1. a. Which, if any, of the three estimation methods—educated guess, judgment sample, or random sample—do you think is more likely to give a sample that is most representative of the population? Why?
  
  - b. Reset page 3.2. Generate a distribution of 30 sample means based on 30 random samples. Return to page 3.4. The means calculated from the judgment samples you made as a class are graphed on the bottom axis. The top axis shows the distribution of the 30 mean lengths from the random samples you generated on page 3.2. How do the distributions compare?
  
  - c. Which sampling method seems to give results that are more representative of the population? Explain your reasoning.
- 
2. Sandra claimed that the mean of a random sample seems to be a good estimator for a population mean. Do you agree or disagree with Sandra? Use the TNS activity to support your reasoning.

