Lesson: Distribution of Sample Proportions

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Level: Statistics or AP Statistics

Overview: This Alice world is essentially an “applet” that simulates the creation of the distribution of sample proportions after repeated simple random samples are drawn.

Objectives and Goals:

(AP Standards)

1A. Constructing and interpreting graphical displays of distributions of univariate data (dotplot, stemplot, histogram, cumulative frequency plot).

3D. Sampling Distributions

Narrative: This world can either be used by the instructor in whole-class presentation or by students as a tutorial in class or elsewhere. The population parameter p can be reset by changing the value in the line of code for random number generation. Although time consuming, running 30 or more samples is recommended to see a good depiction of the shape of the distribution. Although the resulting graphical depiction is really not a true bar graph, at this point my lack of experience in Alice programming has limited my capability to produce a bar graph.