Statistics of Immigration in Philadelphia

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Abstract:

“Statistics of Immigration in Philadelphia” is a three-lesson unit plan for five days which can be used by any math teacher who teaches Algebra 2. Throughout this lesson unit students will be able to explore the history of immigration in Philadelphia of different ethnic groups during late 19th century, early 20th century, and in current times. They will have the chance to manipulate the numbers and create different charts with the data and make predictions for the future. Since there is a significant amount of data and information about rates of immigration, it can be interesting to use statistics to study and make predictions about it. With the exception of the indigenous people of the land, all Americans are immigrants in one way or another, and through math students can learn more about their roots. Students can make classifications of data about the flux of immigrants coming from different countries based on race, religion, age, sex, education, and their beliefs. In order to analyze information about large groups, statistic studies smaller parts or samples of population. By carefully using the sampling method, students should be able to provide a reasonable representation of immigrant populations. This unit fully complements the high school mathematics curriculum and Pennsylvania math standards. Throughout this unit students would be able to apply the measure of central tendency, and to display data with bar graphs, circle graphs, stem-and-whisker plots, scatter plots, and histograms. Also students would be able to analyze measures of central tendency, to compose and contrast different plots of data, and to make valid inferences, predictions and arguments based on probability. Through the activities in this unit, students also will be able to use computers and the Internet to search for the data and to work with this data by using graphing calculators to create tables and graphs.